Jan Delaval

Access DB# 75515

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: S. Kumar Examiner #: 69591 Date: 9/12/02

Art Unit: 1621 Phone Number 30 8 4554 Serial Number: 10/664,123

Mail Box and Bldg/Room Location: CM1 7307 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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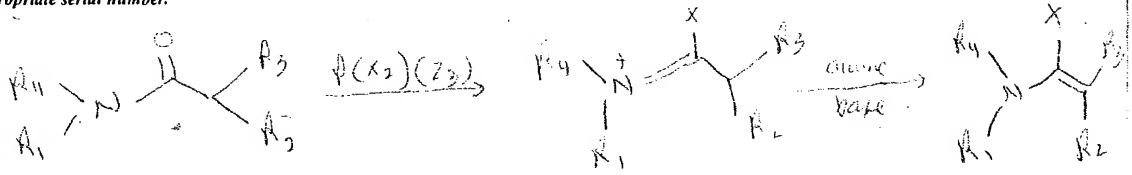
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Alpha-haloenamine reagents & B19

Inventors (please provide full names): Dennis P. Phillion

Earliest Priority Filing Date: 8/30/2001

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*



See Dennis 1-64.

Also see various examples.

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jan.delaval@uspto.gov

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Searcher: Jan

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Searcher Location:

Date Searcher Picked Up: 9/19/02

Date Completed: 9/19/02

Searcher Prep & Review Time:

Clerical Prep Time: 30

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Type of Search

NA Sequence (#)

AA Sequence (#)

Structure (#) ✓

Bibliographic

Litigation

Fulltext

Patent Family

Other

Vendors and cost where applicable

STN ✓

Dialog

Questel/Orbit

Dr.Link

Lexis/Nexis

Sequence Systems

WWW/Internet

Other (specify)

PTO-1590 (8-01)

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=> d his

     (FILE 'HOME' ENTERED AT 06:57:08 ON 19 SEP 2002)
               SET COST OFF

     FILE 'HCAPLUS' ENTERED AT 06:57:32 ON 19 SEP 2002
               E PHILLION D/AU
L1             30 S E3,E4,E6-E8
               E US2002-061617/AP,PRN
               E WO2002-US27953/AP,PRN
               E WO2002-US25609/AP,PRN
               E US2001-316151
               E US2001-316151/AP,PRN
L2              0 S L1 AND HALOENAMINE
L3             16 S HALOENAMINE
L4             11 S L3 AND ALPHA
L5            606 S AMINE#/CW (L) ENAMINE
L6            240 S AMINE#/CW (L) HALO
L7              4 S L5 AND L6
L8              3 S L7 AND ALPHA
L9             13 S L4,L8
L10             5 S L3 NOT L9
L11           103 S HALO(S)ENAMINE
L12           154 S HALO(L)ENAMINE
L13            48 S L11,L12 AND ALPHA
L14             9 S L9 AND L13
L15            13 S L9,L14
L16            39 S L13 NOT L15
L17             4 S L16 AND L6,L5
L18            17 S L15,L17
L19            35 S L16 NOT L18
               SEL DN AN 7 8 9 13 23 24
L20             6 S L19 AND E1-E18
L21            23 S L18,L20
L22            24 S ALPHA()(CHLOROENAMINE OR BROMOENAMINE OR FLUOROENAMINE OR IOD
L23            68 S ALPHA(S)(CHLORO OR BROMO OR FLUORO OR IODO)(S)ENAMINE
L24            41 S ALPHA(S)HALO?(S)ENAMINE
L25            17 S L21 AND L22-L24
L26            23 S L21,L25
L27           105 S L22-L24 NOT L26
L28            97 S L27 NOT L19
L29            44 S L28 AND (NEW REAGENT OR REACTIVE INTERMEDIATE OR SYNTHESIS OR
               SEL DN AN 9 23 26 27 30 34 38 39 41 44
L30            10 S E19-E48 AND L29
L31            33 S L26,L30
               E ENAMINE/CT
               E E4+ALL
L32          1739 S E8
L33           156 S L32 (L) (HALO? OR CHLORO? OR BROMO? OR FLUORO? OR IODO? OR CH
L34           131 S L33 NOT L13-L31
L35             4 S L34 AND (PARTIALLY FLUORINATED OR BROMINATION OR VERY MILD CO
               SEL DN AN 2-3
L36             2 S L35 AND E1-E6
L37            37 S L31,L35
L38            76 S L32 (L) ALPHA
L39            56 S L38 NOT L33-L37
L40            37 S L37 AND L1-L39
L41            37 S L40 AND ?ENAMINE?
L42            37 S L41 AND (HALO? OR CHLOR? OR BROM? OR FLUOR? OR IODO? OR IODI?
L43            35 S L42 AND ALPHA
L44             2 S L42 NOT L43
L45         20436 S TRIETHYLAMINE OR TRIETHYL AMINE OR TRI ETHYLAMINE OR TRI ETHY
L46         20889 S TERTIARY AMINE
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                E TERTIARY AMINE/CT
                E E6+ALL
L47          5470 S E2

     FILE 'REGISTRY' ENTERED AT 07:46:31 ON 19 SEP 2002
L48             1 S 121-44-8

     FILE 'HCAPLUS' ENTERED AT 07:47:18 ON 19 SEP 2002
L49         17005 S L48
L50           148 S DIETHYLAMINOETHANE OR DIETHYLAMINO ETHANE OR DIETHYL ETHANAMI
L51         47070 S L45-L47,L49,L50
L52             1 S PENTAVAL?(L)PHOSPHOROUS(S)(HALIDE OR CHLORIDE OR BROMIDE OR I
L53           106 S PHOSPHOROUS()(PENTABROMIDE OR PENTACHLORIDE OR PENTAFLUORIDE
L54          3643 S PHOSPHOR?()(PENTABROMIDE OR PENTACHLORIDE OR PENTAFLUORIDE OR
L55             6 S PHOSPHOR? PENTAIODIDE

     FILE 'REGISTRY' ENTERED AT 07:55:17 ON 19 SEP 2002
L56             4 S 10026-13-8 OR 7789-69-7 OR 7647-19-0 OR 66656-29-9
L57           840 S P/ELS AND (CL OR BR OR I OR F)/ELS NOT (C OR N OR S OR SI OR
L58           526 S L57 NOT (CCS OR RIS OR PMS OR MNS)/CI
L59            48 S L58 AND NR>=2
L60           478 S L58 NOT L59
L61           279 S L60 AND 1/NC
L62           215 S L61 AND 1/P
L63           124 S L62 NOT (TIS OR AYS)/CI
L64           119 S L63 NOT 37CL
L65           114 S L64 NOT SE/ELS
L66           113 S L65 NOT CA/ELS
L67           108 S L66 NOT B/ELS
L68           107 S L67 NOT MN/ELS
L69           100 S L68 NOT ((CD OR GE)/ELS OR 35CL)
L70            98 S L69 NOT (TA OR NB)/ELS
L71            93 S L70 NOT 32P
L72            83 S L71 NOT (36CL OR 33P OR 18F OR 35P OR 74BR OR 35CL OR P35CL?
L73            81 S L72 NOT (P79BR? OR 79BR)
L74            72 S L73 NOT (CLP OR BRP OR IP OR FP OR P81BR?)
L75            13 S L74 AND 6/ATC
L76            13 S L56,L75
L77            59 S L74 NOT L76

     FILE 'HCAPLUS' ENTERED AT 08:09:17 ON 19 SEP 2002
L78          2781 S L76
L79          5810 S L77
L80          9904 S L78,L79,L52-L55
                SEL RN L22
                DEL SEL

     FILE 'REGISTRY' ENTERED AT 08:10:53 ON 19 SEP 2002

     FILE 'HCAPLUS' ENTERED AT 08:10:53 ON 19 SEP 2002
                SET SMARTSELECT ON
L81           SEL L22 1- RN :     509 TERMS
                SET SMARTSELECT OFF

     FILE 'REGISTRY' ENTERED AT 08:10:54 ON 19 SEP 2002
L82           509 S L81
L83           198 S L82 AND (N AND (CL OR BR OR I OR F))/ELS
L84               STR
L85            50 S L84
L86         25524 S L84 FUL
L87               STR L84
L88          2480 S L87 FUL SUB=L86
                SAV L88 KUMAR061/A
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L89             STR L87
L90       10183 S L89 FUL SUB=L86
                SAV L90 KUMAR061A/A
L91        2124 S L88 AND 1/NC
L92         356 S L88 NOT L91

     FILE 'HCAPLUS' ENTERED AT 08:17:39 ON 19 SEP 2002
L93        1163 S L88
L94          41 S L93 AND L51
L95          43 S L93 AND L80
L96        5714 S L90
L97          34 S L83 AND L96
L98           1 S L94 AND L95 AND L96
L99          72 S L88/P AND L94,L95,L97
L100         26 S L99 AND (L51(L)(RACT OR RCT OR RGT OR CAT)/RL OR L90(L)(RACT
L101         16 S L100 AND L51
L102         64 S L93 AND L3-L6,L11,L12,L22-L24,L32-L34
L103          3 S L102 AND L80
L104         15 S L43 AND L93-L103,L45-L47,L49-L55,L78-L80
L105         35 S L43,L104
L106      59697 S ACETONITRILE
L107     113831 S TETRAHYDROFURAN
L108       7836 S 1 4 DIOXANE
L109      12138 S METHYLENECHLORIDE OR METHYLENE CHLORIDE
L110      39945 S CHLOROFORM
L111      10466 S 1 2 DICHLOROETHANE
L112         64 S 1 2 DICHLORO ETHANE
L113     127691 S TOLUENE
L114     245181 S BENZENE

     FILE 'REGISTRY' ENTERED AT 08:33:43 ON 19 SEP 2002
L115          8 S 75-05-8 OR 109-99-9 OR 123-91-1 OR 75-09-2 OR 67-66-3 OR 71-4

     FILE 'HCAPLUS' ENTERED AT 08:33:54 ON 19 SEP 2002
L116          0 S L104 AND L106-L114,L115
L117          9 S L1 AND L2-L47,L49-L55,L78-L80,L93-L114
L118        220 S PHARMACIA?/PA,CS AND L2-L47,L49-L55,L78-L80,L93-L114
L119          1 S L118 AND L93
L120          0 S L118 AND L3-L6,L11,L12,L22-L24,L32-L34

     FILE 'REGISTRY' ENTERED AT 08:37:50 ON 19 SEP 2002
L121          1 S L88 AND C6H12CLN/MF
L122          4 S L88 AND C12H16CLN/MF AND 46.150.18/RID
L123          1 S L122 NOT BUTEN
L124         59 S (C11H16N2O4 OR C11H15CLN2O3)/MF AND NC4/ES AND 1/NR
L125         42 S L124 AND ESTER
L126         30 S L124 AND 16.136.9/RID
L127         19 S L125 AND L126
L128          5 S L127 AND 1 METHYL
L129         25 S L126 NOT L128
L130          3 S L129 AND 1 METHYL
L131          1 S 77716-11-1
L132          3 S L124 AND CL/ELS
L133         20 S C10H13CLO2SI/MF AND 46.150.18/RID
L134          1 S L133 AND BENZOIC ACID AND 2 CHLORO 6
L135          7 S C10H12CL2OSI/MF AND 46.150.18/RID AND 1/NR
L136          1 S L135 AND BENZOYL CHLORIDE
L137        101 S C7H6O3/MF AND 46.150.18/RID AND 1/NR
L138         28 S L137 AND 2 HYDROXY
L139         27 S L138 AND BENZOIC
                E BENZOIC ACID, 2-HYDROXY-/CN
L140          1 S E3
L141         67 S C7H5CLO2/MF AND 46.150.18/RID AND 1/NR
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L142          7 S L141 AND 2 HYDROXY
L143          1 S 1441-87-8
L144        260 S C8H8O3/MF AND 46.150.18/RID AND 1/NR
L145          6 S L144 AND 2 HYDROXY AND METHYL ESTER
L146          1 S 119-36-8
L147         26 S L137 AND 4 HYDROXY AND BENZOIC
L148          1 S 99-96-7
L149          4 S L141 AND 4 HYDROXY
L150          1 S 28141-24-4
L151          9 S L144 AND 4 HYDROXY AND METHYL ESTER
L152          1 S 99-76-3
L153        378 S C8H9NO2/MF AND 46.150.18/RID AND 1/NR
L154         47 S L153 AND 4 HYDROXY
L155          1 S L154 AND BENZAMIDE AND N METHYL
L156         16 S C11H16CLNOSI/MF AND 46.150.18/RID AND 1/NR
L157          2 S L156 AND BENZAMIDE
L158          1 S 150108-45-5
L159         69 S C7H5NO4/MF AND 46.150.18/RID AND 1/NR
L160         12 S L159 AND 2 NITRO
L161          7 S L160 AND BENZOIC
L162          1 S 552-16-9
L163         12 S C7H4CLNO2/MF AND 46.150.18/RID AND 1/NR
L164         28 S C7H4CLNO3/MF AND 46.150.18/RID AND 1/NR
L165          1 S L164 AND BENZOYL CHLORIDE AND 2 NITRO
L166        169 S C8H7NO4/MF AND 46.150.18/RID AND 1/NR
L167         32 S L166 AND 2 NITRO
L168          7 S L167 AND BENZOIC ACID
L169          1 S 606-27-9
L170        198 S C8H8N2O3/MF AND 46.150.18/RID AND 1/NR
L171         32 S L170 AND 2 NITRO
L172          1 S L171 AND BENZAMIDE AND N METHYL

     FILE 'HCAPLUS' ENTERED AT 09:26:12 ON 19 SEP 2002
L173         71 S L121
L174          0 S L131 AND L121

     FILE 'REGISTRY' ENTERED AT 09:26:45 ON 19 SEP 2002
L175         45 S NCNC2/ES AND C10H15N3O4/MF AND 1/NR
L176         10 S L175 AND 1 METHYL
L177          1 S 128293-64-1
L178          0 S NCNC2/ES AND C10H14CLN3O3/MF AND 1/NR

     FILE 'HCAPLUS' ENTERED AT 09:30:03 ON 19 SEP 2002
L179          0 S L177 AND L173
L180          1 S L123
L181          0 S (L134,L136,L158,L140,L143,L146,L148,L150,L152,L155,L162,L165,
L182          1 S L134 AND L136,L158
L183          1 S L136 AND L158
L184          1 S L182,L183
L185        529 S L140 AND L143,L146
L186         13 S L143 AND L146
L187          8 S L185 AND L186
L188          0 S L146/P AND L187
L189        554 S L148 AND (L150,L152,L155)
L190          3 S L150 AND L152,L155
L191          2 S L189 AND L190
L192          0 S (L152/P OR L155/P) AND L191
L193         59 S L162 AND L165,L169,L172
L194          2 S L165 AND L169,L172
L195          0 S L193 AND L194
L196          0 S L1 AND L173,L123
L197          2 S L1 AND L131,L177,L134,L136,L158,L140,L143,L146,L148,L150,L152
L198          2 S L184,L197
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L199          37 S L105,L198
L200           0 S N 1 CHLORO 2 METHYLPROP 1 ENYL N METHYL AMINOMETHYL?
L201          10 S CHLORO(L)METHYLPROP?(L)?AMINOMETHYL?
L202           0 S L180 AND ?STYREN?

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FILE LAST UPDATED: 18 Sep 2002  (20020918/ED)

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 substance identification.

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information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> d l199 all tot

L199 ANSWER 1 OF 37  HCAPLUS  COPYRIGHT 2002 ACS
AN   2001:799119  HCAPLUS
DN   136:199946
TI   .alpha.-Bromination of .beta.-enamino compounds using
     K-10
AU   Braibante, Mara E. F.; Braibante, Hugo T. S.; Rosso, Giovanni B.; Da Roza,
     Juliano K.
CS   Departamento de Quimica, Universidade Federal de Santa Maria, Santa Maria,
     97105-900, Brazil
SO   Synthesis (2001), (13), 1935-1937
     CODEN: SYNTBF; ISSN: 0039-7881
PB   Georg Thieme Verlag
DT   Journal
LA   English
CC   24-5 (Alicyclic Compounds)
OS   CASREACT 136:199946
AB   .alpha.-Bromo-3-amino-5,5-dimethylcyclohex-2-en-1-ones
     and .alpha.-bromo-.beta.-enamino compds.
     MeC(NH2):CBrCOR (R = Me, OEt) were conveniently prepd. using NBS supported
     on montmorillonite (K-10).  Other reaction conditions such as di-tert-Bu
     peroxide/NBS/CCl4, and Br2/CH2Cl2 were also studied for
     3-amino-5,5-dimethylcyclohex-2-en-1-ones resulting in a mixt. of mono and
     di-brominated compds.
ST   montmorillonite catalyst regioselective bromination
     enamine
IT   Bromination
       Bromination catalysts
     Regiochemistry
```

(.alpha.-**bromination** of .beta.-enamino compds.
using K-10)
IT **Enamines**
RL: RCT (Reactant); RACT (Reactant or reagent)
(.alpha.-**bromination** of .beta.-enamino compds.
using K-10)
IT 1318-93-0, Montmorillonite K-10, uses
RL: CAT (Catalyst use); USES (Uses)
(.alpha.-**bromination** of .beta.-enamino compds.
using K-10)
IT 701-58-6 873-95-0, 3-Amino-5,5-dimethylcyclohex-2-en-1-one 889-31-6
1118-66-7 7318-00-5 15255-66-0 18940-21-1 55800-10-7 80555-73-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(.alpha.-**bromination** of .beta.-enamino compds.
using K-10)
IT 51924-66-4P 51924-68-6P 52265-03-9P 102689-02-1P 159423-68-4P
401511-96-4P 401511-97-5P 401511-98-6P 401511-99-7P 401512-00-3P
401512-01-4P 401512-02-5P 401512-03-6P 401512-04-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(.alpha.-**bromination** of .beta.-enamino compds.
using K-10)
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(8) Rosso, G; M Sc Dissertation, Universidade Federal de Santa Maria 2000

L199 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:773362 HCAPLUS
DN 136:263126
TI Syntheses and reactions of .**alpha**.-**benzotriazolylenamines**: stable analogs of .**alpha**.-**chloroenamines**
AU Katritzky, Alan R.; Nichols, Daniel A.; Voronkov, Michael V.
CS Center for Heterocyclic Compounds, Dept. Chem., Univ. Florida, Gainesville, FL, 32611-7200, USA
SO ARKIVOC [online computer file] (2000), 1(5), 667-683
CODEN: AKVCFI
URL: http://www.arkat.org/arkat/journal/Issue5/ms0065/ms0065.pdf
PB ARKAT Foundation
DT Journal; (online computer file)
LA English
CC 28-10 (Heterocyclic Compounds (More Than One Hetero Atom))
AB Synthetic routes to and utility of .**alpha**.-**benzotriazolylenamines** have been explored. .**alpha**.-**Benzotriazolylenamines** were successfully synthesized (i) from N-(trans-buten-1-yl)-N-methylaniline (2) by reaction with 1-**chloro**-1H-1,2,3-benzotriazole, followed by base induced elimination of HCl and (ii) from amides using benzotriazole, POCl3 and NEt3 in CH3CN. The utility of the products as stable alternatives to .**alpha**.-**haloenamines** was demonstrated by the successful reaction of N-[1-(2H-1,2,3-benzotriazol-2-yl)-2-methylprop-1-enyl]-N-methylaniline with phenylethynylzinc **chloride** to form N-methyl-N-[2-methyl-1-(2-phenylethynyl)-1-propenyl]aniline.
ST **benzotriazolylenamine** prepn reaction
IT 103-69-5 122-39-4, reactions 142-62-1, Hexanoic acid, reactions
6738-06-3, Phenylethynylmagnesium **bromide** 21050-95-3
40669-47-4 42883-79-4 55577-65-6 63017-96-9 144691-18-9

405103-81-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. and reactions of .alpha.-**benzotriazolylenamines**)

IT 305851-38-1P 305851-39-2P 305861-36-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reactions of .alpha.-**benzotriazolylenamines**)

IT 305861-35-2P 305861-37-4P 305861-38-5P 405103-82-4P 405103-83-5P
405103-84-6P 405103-85-7P 405103-86-8P 405103-87-9P 405103-88-0P
405103-89-1P 405103-90-4P 405103-91-5P 405103-92-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of .alpha.-**benzotriazolylenamines**)

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L199 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:213419 HCAPLUS

DN 132:334206
TI Synthesis of 1-dialkylamino- and 1- and 2-alkoxyenynes by Pd-catalyzed cross-coupling of 1-**haloenamines** and 1- and 2-mono-, 2,2-di-, and 1,2,2-tribromoalkenyl alkyl ethers with terminal alkynes
AU Kazankova, M. A.; Trostyanskaya, I. G.; Lutsenko, S. V.; Efimova, I. V.; Beletskaya, I. P.
CS Faculty of Chemistry, Moscow State University, Moscow, 119899, Russia
SO Russian Journal of Organic Chemistry (Translation of Zhurnal Organicheskoi Khimii) (1999), 35(9), 1273-1277
CODEN: RJOCEQ; ISSN: 1070-4280
PB MAIK Nauka/Interperiodica Publishing
DT Journal
LA English
CC 23-9 (Aliphatic Compounds)
Section cross-reference(s): 25
OS CASREACT 132:334206
AB A new procedure was developed for stereoselective synthesis of new 2-dialkylaminoenynes, 1- and 2-alkoxyenynes, and 1-alkoxyenediynes by Pd-catalyzed cross-coupling of **chloroenamines** and mono-, tri-, and dibromoalkenyl alkyl ethers with terminal alkynes. The reactions of 1,2,2-tribromoethenyl alkyl ethers involve replacement of **bromine** in the .**alpha**.-position with respect to the alkoxy group.
ST enyne dialkylamino alkoxy prepn; palladium coupling **haloenamine** **bromoalkenyl** ether alkyne
IT Cross-coupling reaction
Cross-coupling reaction catalysts
(palladium-catalyzed cross-coupling of alkynes with **chloroenamine** and with alkyl **bromoalkenyl** ethers)
IT Alkynes
RL: RCT (Reactant); RACT (Reactant or reagent)
(palladium-catalyzed cross-coupling of alkynes with **chloroenamine** and with alkyl **bromoalkenyl** ethers)
IT Alkenynes
RL: SPN (Synthetic preparation); PREP (Preparation)
(palladium-catalyzed cross-coupling of alkynes with **chloroenamine** and with alkyl **bromoalkenyl** ethers)
IT Enediynes
RL: SPN (Synthetic preparation); PREP (Preparation)
(palladium-catalyzed cross-coupling of alkynes with **chloroenamine** and with alkyl **bromoalkenyl** ethers)
IT Ethers, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(unsatd.; palladium-catalyzed cross-coupling of alkynes with **chloroenamine** and with alkyl **bromoalkenyl** ethers)
IT 7681-65-4, Cuprous **iodide** 13965-03-2, Dichlorobis(triphenylphosphine)palladium 14221-01-3, Tetrakis(triphenylphosphine)palladium
RL: CAT (Catalyst use); USES (Uses)
(palladium-catalyzed cross-coupling of alkynes with **chloroenamine** and with alkyl **bromoalkenyl** ethers)
IT 536-74-3, Ethynylbenzene 627-41-8, Methyl propargyl ether 917-92-0, tert-Butylacetylene 1066-54-2, (Trimethylsilyl)acetylene 7223-38-3, N,N-Dimethylpropargylamine **35920-24-2** 100704-20-9 189686-76-8 220580-64-3 233764-81-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(palladium-catalyzed cross-coupling of alkynes with **chloroenamine** and with alkyl **bromoalkenyl** ethers)
IT 267889-55-4P 267889-56-5P 267889-57-6P 267889-58-7P 267889-59-8P 267889-60-1P 267889-61-2P 267889-62-3P 267889-63-4P 267889-64-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(palladium-catalyzed cross-coupling of alkynes with **chloroenamine** and with alkyl **bromoalkenyl** ethers)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD

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(15) Wong, T; J Org Chem 1994, V59, P5527 HCAPLUS

L199 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1998:480680** HCAPLUS
DN **129:216202**
TI A general and practical method of synthesis of 2-disubstituted 1-**chloro enamines** and 1-**bromo enamines**
AU Ghosez, Leon; George-Koch, Isabelle; Patiny, Luc; Houtekie, Marc; Bovy, Philippe; Nshimyumukiza, Prosper; Phan, Thao
CS Laboratoire de Chimie organique de Synthe, Universite catholique de Louvain, Louvain-la-Neuve, B - 1348, Belg.
SO Tetrahedron (1998), 54(31), 9207-9222
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier Science Ltd.
DT Journal
LA English
CC 21-2 (General Organic Chemistry)
OS CASREACT 129:216202
AB Disubstituted-.**alpha.**-**chloroenamines** are useful synthetic intermediates which had earlier been prepd. by the reaction of tertiary amides with phosgene. The toxicity of the latter led us to systematically investigate new synthetic routes towards .**alpha.**-**chloro enamines** and .**alpha.**-**bromo enamines**. The reactions of various **halogenating** agents (SOCl2, diphosgene, triphosgene, OPCl3, OPBr3) with tertiary amides followed by the addn. of **triethylamine** have been studied. Thionyl **chloride** was found unsuitable for the prepn. of .**alpha.**-**chloroenamines**. Of the other **halogenating** agents, OPCl3 and OPBr3 were found the most practical. The generality of the method is illustrated by the synthesis of fifteen .**alpha.**-**chloroenamines** and six .**alpha.**-**bromo enamines**.
ST **bromo enamine** prepn; **chloro enamine** prepn
IT **Enamines**
RL: SPN (Synthetic preparation); PREP (Preparation)
(.**alpha.**-**halo**; prepn. of **chloro enamines** and **bromo enamines**)
IT 62-53-3, **Benzenamine**, reactions 79-30-1, 2-Methylpropanoyl **chloride** 100-61-8, reactions 108-18-9, Diisopropylamine 110-85-0, Piperazine, reactions 110-91-8, Morpholine, reactions 123-75-1, Pyrrolidine, reactions 124-40-3, Dimethylamine, reactions 872-50-4, reactions 957-51-7, N,N-Dimethyldiphenylacetamide 2556-73-2, N-Methylcaprolactam 2719-27-9, Cyclohexanecarbonyl **chloride** 3282-30-2, Pivaloyl **chloride** 23356-96-9, L-Prolinol 35660-94-7, Tigloyl **chloride** 134860-30-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **chloro enamines** and **bromo**

enamines)
IT 6282-98-0P 17566-51-7P 18071-39-1P 18940-58-4P 19597-07-0P
21678-37-5P 32223-06-6P 33931-47-4P 55577-65-6P 55917-05-0P
143726-38-9P 212518-24-6P 212518-25-7P 212518-26-8P 212518-27-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of **chloro enamines** and **bromo enamines**)
IT **26189-59-3P 58933-80-5P 58933-81-6P**
60180-60-1P 65785-45-7P 66206-72-2P
73630-93-0P 75115-55-8P **87443-04-7P**
116437-56-0P 149554-70-1P 201679-72-3P
201679-73-4P 201679-74-5P 201679-78-9P
201679-79-0P 201679-80-3P 201679-81-4P
201679-82-5P **212518-28-0P 212518-29-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **chloro enamines** and **bromo enamines**)

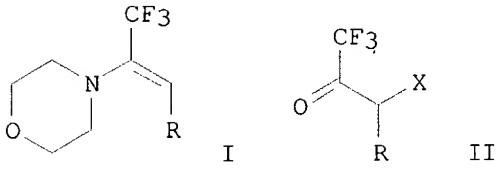
L199 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1998:804** HCAPLUS
DN **128:114663**
TI Electron ionization and CID mass spectra of **.alpha.-halo enamines**
AU de Hoffmann, E.; George-Koch, I.; Ghosez, L.
CS Dep. of Chem., Univ. Catholique de Louvain, Louvain-la-Neuve, 1348, Belg.
SO Bulletin des Societes Chimiques Belges (1997), 106(7-8), 475-479
CODEN: BSCBAG; ISSN: 0037-9646
PB Bulletin des Societes Chimiques Belges
DT Journal
LA English
CC 22-8 (Physical Organic Chemistry)
AB Fragmentations of ions obtained by electron-impact ionization of 25 **chloro**- and **bromoenamines** were studied by low collision-energy tandem mass spectrometry. For most compds., the main fragmentation pathways involved (a) loss of an **halogen** atom, (b) loss of an alkyl group linked to the N atom, and (c) loss of an alkyl fragment from the .beta.-position. Some structural features were found to induce specific fragmentation pathways. Thus, when the entire **enamine** function is part of a 5-membered ring, loss of an H atom was obsd. as a result of a stereoelectronic effect. The presence of a vinyl group at the .beta.-position gave fragments contg. a pyridine ring.
ST **halo enamine** mass spectra; fragmentation **halo enamine** mechanism
IT Collision-induced dissociation
Fragmentation reaction
Mass spectra
Stereoelectronic effect
(fragmentation mechanisms in electron-ionization and CID mass spectra of **.alpha.-halo enamines**)
IT **Enamines**
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(**.alpha.-halo**-; fragmentation mechanisms in electron-ionization and CID mass spectra of **.alpha.-halo enamines**)
IT **26189-59-3 35920-24-2 58933-80-5**
58933-81-6 60180-60-1 65785-45-7
66206-72-2 73630-93-0 75115-55-8 **87443-04-7**
116437-56-0 149554-70-1 201679-72-3
201679-73-4 201679-74-5 201679-75-6
201679-76-7 201679-77-8 201679-78-9
201679-79-0 201679-80-3 201679-81-4
201679-82-5 201679-83-6 201679-84-7

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(fragmentation mechanisms in electron-ionization and CID mass spectra of **.alpha.-halo enamines**)

L199 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1997:403882** HCAPLUS
DN **127:121576**
TI Introduction of **bromine** and **chlorine** substituents in medium ring ethers and lactones
AU Bendall, Justin G.; Payne, Andrew N.; Screen, Thomas E. O.; Holmes, Andrew B.
CS Univ. Chem. Lab., Cambridge, CB2 1EW, UK
SO Chemical Communications (Cambridge) (1997), (11), 1067-1068
CODEN: CHCOFS; ISSN: 1359-7345
PB Royal Society of Chemistry
DT Journal
LA English
CC 26-1 (Biomolecules and Their Synthetic Analogs)
OS CASREACT 127:121576
AB A convenient prepn. of **.alpha.-halo enamines** Me2NC(X)=CMe2 (X = Br, Cl) using oxalyl halides is described together with applications of these reagents in the **halogenation** of .beta.-hydroxy cyclic ethers and lactones.
ST **enamine alpha halo** prepn; medium ring ether lactone **halogenation**
IT Ethers, preparation
Lactones
RL: SPN (Synthetic preparation); PREP (Preparation)
(medium ring; mild synthesis of **.alpha.-halo enamine** for **halogenating** medium ring ethers and lactones)
IT **Halogenation**
(mild synthesis of **.alpha.-halo enamine** for **halogenating** medium ring ethers and lactones)
IT 453-20-3 590-67-0 2216-51-5, (-)-Menthol 21678-37-5 84214-06-2 97514-97-1 192719-10-1 192719-13-4 192719-17-8 192766-39-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(mild synthesis of **.alpha.-halo enamine** for **halogenating** medium ring ethers and lactones)
IT **26189-59-3P 73630-93-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(mild synthesis of **.alpha.-halo enamine** for **halogenating** medium ring ethers and lactones)
IT 931-77-1P 931-78-2P 13371-12-5P 19311-37-6P 19311-38-7P 87161-57-7P 192719-11-2P 192719-12-3P 192719-14-5P 192719-15-6P 192719-16-7P 192719-18-9P 192719-19-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(mild synthesis of **.alpha.-halo enamine** for **halogenating** medium ring ethers and lactones)

L199 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1996:737347** HCAPLUS
DN **126:103659**
TI **Halogenation** of 1-trifluoromethyl **enamines**: A new and efficient **synthesis** of **.alpha.-bromo-** and **.alpha.-iodo-**trifluoromethyl ketones
AU Begue, Jean-Pierre; Bonnet-Delpon, Daniele; Bouvet, Denis; Rock, Michael H.
CS BioCIS-CNRS, Centre d'Etudes Pharmaceutiques, Rue J.B. Clement, F-92296, Chatenay-Malabry, Fr.
SO Journal of Fluorine Chemistry (1996), 80(1), 17-20
CODEN: JFLCAR; ISSN: 0022-1139

PB Elsevier
DT Journal
LA English
CC 21-2 (General Organic Chemistry)
Section cross-reference(s): 27
OS CASREACT 126:103659
GI



I

II

AB Treatment of the 1-trifluoromethyl **enamines** I (R = alkyl, phenyl) with **bromine** or **iodine** resulted in the formation of the corresponding iminium salts. Treatment of any of these salts with methanol resulted in the formation of the corresponding . **alpha.-haloalkyl** trifluoromethyl ketones II (same R; X = **chloro, iodo**).

ST **fluoromethyl enamine halogenation**; ketone trifluoromethyl **haloalkyl** prepn; alkanone trifluoro prepn

IT **Halogenation**
(prepn. of trifluoromethyl ketones by **halogenation** of (trifluoromethyl)**enamines**)

IT **Enamines**
RL: RCT (Reactant); RACT (Reactant or reagent)
(trifluoromethyl; prepn. of trifluoromethyl ketones by **halogenation** of (trifluoromethyl)**enamines**)

IT Ketones, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(trifluoromethyl; prepn. of trifluoromethyl ketones by **halogenation** of (trifluoromethyl)**enamines**)

IT 7553-56-2, **Iodine**, reactions 7726-95-6, **Bromine**, reactions 123007-80-7 186001-39-8 186001-40-1 186001-41-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of trifluoromethyl ketones by **halogenation** of (trifluoromethyl)**enamines**)

IT 186001-46-7P 186001-47-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of trifluoromethyl ketones by **halogenation** of (trifluoromethyl)**enamines**)

IT 395-15-3P 122977-77-9P 122977-78-0P 122977-79-1P 186001-42-3P 186001-43-4P 186001-44-5P 186001-45-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of trifluoromethyl ketones by **halogenation** of (trifluoromethyl)**enamines**)

L199 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1996:108957** HCAPLUS
DN **124:288383**
TI **Bromination** of secondary and tertiary **enamines**
AU Lyubchanskaya, V. M.; Mukhanova, T. I.; Alekseeva, L. M.; Granik, V. G.
CS TsKhLS, VNIKhFI, Moscow, Russia
SO Khimiko-Farmatsevticheskii Zhurnal (1995), 29(11), 37-40
CODEN: KHFZAN; ISSN: 0023-1134
PB Meditsina
DT Journal

LA Russian
CC 21-2 (General Organic Chemistry)
AB Secondary and tertiary **enamines** having an .**alpha**.-Me group and a H atom at the .beta. position were **brominated** by Br2 or N-**bromosuccinimide**. The secondary **enamines** were **brominated** at the .beta. position; the tertiary **enamines** were **brominated** on the .**alpha**.-Me group. Further reactions of the .**alpha**.-(**bromomethyl**) tertiary **enamines** with amines and with CN- were studied.
ST **bromination enamine** regiochem; cyano **enamine** prepn; amino **enamine** prepn
IT Regiochemistry
(of **bromination** of **enamines**)
IT **Bromination**
(regiochem. of **bromination** of **enamines**)
IT **Enamines**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(regiochem. of **bromination** of **enamines**)
IT 16195-93-0 18594-93-9 20771-70-4 20771-77-1 25236-38-8 34523-87-0 62875-03-0 175544-34-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(regiochem. of **bromination** of **enamines**)
IT 175544-40-8P 175544-42-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(regiochem. of **bromination** of **enamines**)
IT **175544-35-1P 175544-36-2P** 175544-37-3P 175544-38-4P 175544-39-5P 175544-41-9P 175544-43-1P 175544-44-2P 175544-45-3P 175544-46-4P 175544-47-5P 175544-48-6P 175544-49-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(regiochem. of **bromination** of **enamines**)

L199 ANSWER 9 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:983031 HCAPLUS
DN 124:145558
TI Metalation Chemistry of N-Ethyl-N-(1-methoxy-2,2-dimethylpropyl)benzamides. A New Protective Group for Secondary Amides
AU **Phillion, Dennis P.**; Walker, Daniel M.
CS Ceregen A Unit, Monsanto Co., St. Louis, MO, 63167, USA
SO Journal of Organic Chemistry (1995), 60(26), 8417-20
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
OS CASREACT 124:145558
AB The synthesis of N-ethyl-N-(1-methoxy-2,2-dimethylpropyl)benzamides and their metalation with s-BuLi or LTMP (lithium 2,2,6,6-tetramethylpiperidide) is described. These protected N-ethylbenzamides are synthesized in excellent yields through the addn. of N-ethyltrimethylacetaldehyde imine to a benzoyl chloride, followed by reaction of the intermediate .alpha.-chloroamide with methanol and triethylamine. Hydrolysis to their corresponding N-ethylbenzamides is achieved under mild acid conditions with aq. HCl in dioxane. N-ethyl-N-(1-methyl-2,2-dimethylpropyl)benzamide ortho-lithio deriv. was stable at room temp. yet reacted with electrophiles at -78.degree.. The metalation and reaction of other N-ethyl-N-(1-methoxy-2,2-dimethylpropyl)benzamides is also described.
ST benzamide protection methoxydimethylpropyl prepn reaction; ortho lithiation protected ethylbenzamide
IT Metalation
Protective groups

(prepn. of (methoxydimethylpropyl)-protected ethylbenzamides and their ortho metalation chem.)

IT 68-12-2, Dmf, reactions 75-04-7, Ethylamine, reactions 624-73-7, 1,2-Diiodoethane 630-19-3, Trimethylacetaldehyde 2949-92-0
150079-25-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of (methoxydimethylpropyl)-protected ethylbenzamides and their ortho metalation chem.)

IT 52135-87-2P 150078-39-0P 150079-68-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of (methoxydimethylpropyl)-protected ethylbenzamides and their ortho metalation chem.)

IT 52369-57-0P 150078-25-4P 150078-61-8P 150078-69-6P 150078-77-6P 150079-83-7P 173204-22-3P 173204-23-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of (methoxydimethylpropyl)-protected ethylbenzamides and their ortho metalation chem.)

L199 ANSWER 10 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:560256 HCAPLUS
DN 119:160256
TI Preparation of heterocyclic and aromatic compounds as fungicides for the control of take-all disease of plants
IN **Phillion, Dennis Paul**; Braccolino, Diane Susan; Graneto, Matthew James; Phillips, Wendell Gary; Van Sant, Karey Alan; Walker, Daniel Mark; Wong, Sai Chi
PA Monsanto Co., USA
SO Eur. Pat. Appl., 78 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM A01N055-00
ICS A01N037-18; A01N055-02; A01N037-40; C07F007-08; C07F007-22; C07F007-30; C07C233-65; C07C317-44; A01N055-04; A01N037-44; C07C235-60; C07C323-62; C07C233-69; C07C237-30; C07C233-66
CC 28-1 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5, 25
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 538231	A1	19930421	EP 1992-870168	19921016
	EP 538231	B1	20010613		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	WO 9307751	A1	19930429	WO 1992-US8633	19921009
	W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KR, LK, MG, MN, MW, NO, PL, RO, RU, SD				
	RW: BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
	AU 9228093	A1	19930521	AU 1992-28093	19921009
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	LT 3276	B	19950525	LT 1992-193	19921015
	ZA 9208024	A	19930827	ZA 1992-8024	19921016
	EP 1088481	A2	20010404	EP 2000-124212	19921016
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
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	CN 1085221	A	19940413	CN 1993-100002	19930102
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PRAI	US 1991-780683	A	19911018		
	US 1992-951997	A	19921002		
	WO 1992-US8633	A	19921009		
	EP 1992-870168	A3	19921016		
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	US 1994-340573	A3	19941116		
	US 1994-365382	A3	19941228		
	US 1994-365391	A3	19941228		
	US 1995-569273	A3	19951208		
	US 1996-754920	A3	19961122		
	US 1998-162032	A3	19980928		

OS MARPAT 119:160256

AB Derivs. of benzene, pyridine, thiophene, furan, pyrrole, pyrazole, thiazole, and isothiazole are claimed as fungicides for the control of take-all disease of plants. Substituents on these arom. ring systems include amides, thioamides, S-alkyl thiocarboxylates, imino derivs., various organosilyl, organogermyl, or organostannyl derivs., aryl derivs., and other org. groups. Preparative examples include benzamide derivs., benzenecarbothioate derivs., and pyridinecarboxamides, among many others. The compds. (285 examples) were effective at 0.1-10 ppm for control of Gaemannomyces graminis var. tritici in vitro, and many of these compds. showed 100% control of the fungi in vivo on Bergen and Anza varieties of wheat. Application of the fungicide to the seed prior to planting is the preferred method of treatment for the disease.

ST fungicide heterocyclic arom prepn; wheat take all disease fungicide

IT Fungicides and Fungistats
(arom. and heterocyclic compds., for control of take-all disease in plants)

IT Aromatic compounds
Heterocyclic compounds
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as fungicides for control of take-all disease)

IT Wheat
(disease, take-all, control of, arom. and heterocyclic compds. as fungicides for)

IT 6196-85-6, 1-Chloro-1-methylcyclopentane 10523-97-4, 1-Chloro-1-methylcyclobutane
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylation by, of benzamide)

IT 1066-54-2, Trimethylsilylacetylene
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkynylation by, of benzamide)

IT 765-30-0, Cyclopropylamine 2450-71-7, Propargylamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(amidation by, of benzoyl chloride deriv.)

IT 107-11-9, 2-Propen-1-amine
RL: RCT (Reactant); RACT (Reactant or reagent)
(amidation by, of thiophenecarboxylic acid)
IT 89-75-8, 2,4-Dichlorobenzoyl chloride 1710-98-1, 4-tert-Butylbenzoyl chloride 2905-61-5, 2,5-Dichlorobenzoyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(amidation of)
IT 106-93-4, Ethylene dibromide
RL: RCT (Reactant); RACT (Reactant or reagent)
(bromination by, of (trimethylsilyl)benzamide)
IT 3141-26-2, 3,4-Dibromothiophene
RL: RCT (Reactant); RACT (Reactant or reagent)
(carboxylation of)
IT 96-50-4, 2-Aminothiazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(chlorodeamination of)
IT 693-16-3, 2-Octanamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with acetyl chloride)
IT 312-94-7, 2-(Trifluoromethyl)benzoyl chloride 393-52-2, 2-Fluorobenzoyl chloride 393-82-8, 2,5-Bis(trifluoromethyl)benzoyl chloride 874-60-2, 4-Methylbenzoyl chloride 1711-07-5, 3-Fluorobenzoyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with amines)
IT 18063-02-0, 2,6-Difluorobenzoyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with aminomethylpropanol)
IT 57-14-7, 1,1-Dimethylhydrazine 95-53-4, 2-Methylaniline, reactions 110-76-9, 2-Ethoxyethylamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with benzoyl chloride deriv.)
IT 95-14-7, 1H-Benzotriazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with benzoyl chloride deriv. and benzaldehyde)
IT 100-52-7, Benzaldehyde, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with benzoyl chloride deriv. and benzotriazole)
IT 14610-37-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with benzoyl chlorides)
IT 814-49-3, Diethyl chlorophosphate
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with ethylamine)
IT 123-75-1, Pyrrolidine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with fluorobenzoyl chloride)
IT 13117-94-7, 2-tert-Butyl-6-methylaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with formic acid)
IT 527-72-0, 2-Thiophenecarboxylic acid 6973-60-0, 1-Methyl-2-pyrrolecarboxylic acid 21739-92-4
RL: PROC (Process)
(conversion of, to acid chloride)
IT 35730-09-7, 2,5-Difluorobenzoyl chloride
RL: PROC (Process)
(conversion of, to benzamide)
IT 454-92-2, 3-(Trifluoromethyl)benzoic acid 947-84-2, 2-Phenylbenzoic acid 21739-93-5, 2-Bromo-5-chlorobenzoic acid
RL: PROC (Process)
(conversion of, to benzamide via acid chloride)
IT 3320-83-0, o-Chlorophenyl isocyanate
RL: PROC (Process)
(conversion of, to carbamate ester)

IT 88-13-1, Thiophene-3-carboxylic acid
RL: PROC (Process)
(conversion of, to carboxamide via acid chloride)
IT 55-22-1, 4-Pyridinecarboxylic acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(conversion of, to carboxamide via acid chloride)
IT 1918-79-2, 5-Methyl-2-thiophenecarboxylic acid 24065-33-6, 5-Chloro-2-thiophenecarboxylic acid
RL: PROC (Process)
(conversion of, to silylated carboxamide deriv. via acid chloride)
IT 78-93-3, Ethyl methyl ketone, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(conversion of, to thiophenecarboxamide)
IT 90-11-9, 1-Bromonaphthalene 95-46-5, 2-Bromotoluene 573-17-1, 9-Bromophenanthrene 580-13-2, 2-Bromonaphthalene
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling of, with benzazaborolone)
IT 60-34-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of, with (ethoxymethylene)cyanoacetate)
IT 62-56-6, Thiourea, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of, with Et pyruvate)
IT 108-94-1, Cyclohexanone, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of, with cyanoacetate and sulfur, in prepn. of fungicides)
IT 105-56-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of, with cyclohexanone and sulfur, in prepn. of fungicides)
IT 94-05-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of, with methylhydrazine)
IT 70-23-5, Ethyl bromopyruvate
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of, with thiourea)
IT 107-09-5, 2-Bromoethylamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclocondensation of, with bromoethylamine)
IT 88-67-5, 2-Iodobenzoic acid 59748-90-2, 4-Bromo-2-chlorobenzoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of, with hexamethyldisilazane)
IT 630-19-3, Trimethylacetaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(imination of)
IT 271-58-9, Anthranil
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative alkylation of)
IT 150079-80-4P 150079-82-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and acidic ring cleavage of)
IT 150079-72-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and alkylation of)
IT 609-67-6P, 2-Iodobenzoyl chloride 5271-67-0P, 2-Thiophenecarboxylic acid chloride 5952-92-1P 16099-04-0P 16372-51-3P 16694-17-0P, 4-Bromo-3-thiophenecarboxylic acid 21900-52-7P 26214-68-6P 41507-35-1P, 3-Thiophenecarbonyl chloride 91489-09-7P 150079-78-0P 150079-86-0P 150108-56-8P 150108-58-0P 150108-59-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and amidation of)
IT 150108-71-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and amine deprotection of)
IT 150108-72-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and arom. chloride substitution of)
IT 65861-69-0P 150079-90-6P 150108-75-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and arom. chlorination of)
IT 10601-63-5P, N-Isopropylpropionamide 23602-00-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and borane redn. of, to amine)
IT 4506-71-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and bromination of)
IT 3034-52-4P, 2-Chlorothiazole
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and carboxylation of)
IT 5398-36-7P, Ethyl 2-amino-4-thiazolecarboxylate
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and chlorodeamination of)
IT 150079-39-3P 150079-49-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and condensation of, with amines)
IT 150079-63-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with benzaldehyde and benzotriazole)
IT 57440-88-7P 131932-72-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with benzoyl chloride deriv.)
IT 150079-65-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with trichloroacetyl chloride)
IT 150108-60-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to (hydroxymethyl)thiophenecarboxamide)
IT 150108-54-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to acetyl deriv.)
IT 5198-87-8P, 2-Chloro-4-thiazolecarboxylic acid 78764-55-3P
150079-25-7P 150079-27-9P 150079-38-2P 150079-48-4P
150079-77-9P 150079-85-9P 150108-55-7P 150108-57-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to acid chloride)
IT 31562-07-9P **150079-26-8P** 150079-28-0P 150079-50-8P
150079-51-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to benzamide)
IT 150079-56-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to benzamide deriv.)
IT 1077-58-3P, 2-tert-Butylbenzoic acid
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to benzamide deriv. via acid chloride)
IT 22921-68-2P, 2-Bromo-5-methoxybenzoic acid 150079-84-8P 150079-89-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to benzamide via acid chloride)

IT 100523-84-0P 150108-63-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to carboxamide via acid chloride)
IT 57021-53-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to tetrahydrobenzothiophenecarboxylate)
IT 31562-01-3P 150079-74-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to .beta.-lactam)
IT 150108-78-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and coupling of, with org. bromides)
IT 31037-02-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deamination of)
IT 150079-35-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and dehydration of)
IT 59147-01-2P, Trimethylsilyl 2-iodobenzoate 150079-76-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and desilylation of)
IT 150079-36-0P 150079-57-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and ethylation of)
IT 150079-52-0P 150079-53-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and fluorination of)
IT 150079-79-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and formylation of)
IT 55523-45-0P 62924-92-9P 85370-65-6P 97308-13-9P 121424-93-9P
121425-02-3P 121425-03-4P 146516-68-9P 150076-57-6P 150076-58-7P
150076-59-8P 150076-60-1P 150076-61-2P 150076-62-3P 150076-63-4P
150076-64-5P 150076-65-6P 150076-66-7P 150076-67-8P 150076-68-9P
150076-69-0P 150076-70-3P 150076-71-4P 150076-72-5P 150076-73-6P
150076-74-7P 150076-75-8P 150076-76-9P 150076-77-0P 150076-78-1P
150076-79-2P 150076-80-5P 150076-81-6P 150076-82-7P 150076-83-8P
150076-84-9P 150076-85-0P 150076-86-1P 150076-87-2P 150076-88-3P
150076-89-4P 150076-90-7P 150076-91-8P 150076-92-9P 150076-93-0P
150076-94-1P 150076-95-2P 150076-96-3P 150076-97-4P 150076-98-5P
150076-99-6P 150077-00-2P 150077-01-3P 150077-02-4P 150077-03-5P
150077-04-6P 150077-05-7P 150077-06-8P 150077-07-9P 150077-08-0P
150077-09-1P 150077-10-4P 150077-11-5P 150077-12-6P 150077-13-7P
150077-14-8P 150077-15-9P 150077-16-0P 150077-17-1P 150077-18-2P
150077-19-3P 150077-20-6P 150077-21-7P 150077-22-8P 150077-23-9P
150077-24-0P 150077-25-1P 150077-26-2P 150077-27-3P 150077-28-4P
150077-29-5P 150077-30-8P 150077-31-9P 150077-32-0P 150077-33-1P
150077-34-2P 150077-35-3P 150077-36-4P 150077-37-5P 150077-38-6P
150077-39-7P 150077-40-0P 150077-41-1P 150077-42-2P 150077-43-3P
150077-44-4P 150077-45-5P 150077-46-6P 150077-47-7P 150077-48-8P
150077-49-9P 150077-50-2P 150077-51-3P 150077-52-4P 150077-53-5P
150077-54-6P 150077-55-7P 150077-56-8P 150077-57-9P 150077-58-0P
150077-59-1P 150077-60-4P 150077-61-5P 150077-62-6P 150077-63-7P
150077-64-8P 150077-65-9P 150077-66-0P 150077-67-1P 150077-68-2P
150077-69-3P 150077-70-6P 150077-71-7P 150077-72-8P 150077-73-9P
150077-74-0P 150077-75-1P 150077-76-2P 150077-77-3P 150077-78-4P

150077-79-5P 150077-80-8P 150077-81-9P 150077-82-0P 150077-83-1P
150077-84-2P 150077-85-3P 150077-86-4P 150077-87-5P 150077-88-6P
150077-89-7P 150077-90-0P 150077-91-1P 150077-92-2P 150077-93-3P
150077-94-4P 150077-95-5P 150077-96-6P 150077-97-7P 150077-98-8P
150077-99-9P 150078-00-5P 150078-01-6P 150078-02-7P 150078-03-8P
150078-04-9P 150078-05-0P 150078-06-1P 150078-07-2P 150078-08-3P
150078-09-4P 150078-10-7P 150078-11-8P 150078-12-9P 150078-13-0P
150078-14-1P 150078-15-2P 150078-16-3P 150078-17-4P 150078-18-5P
150078-19-6P 150078-20-9P 150078-21-0P 150078-22-1P 150078-23-2P
150078-24-3P 150078-25-4P 150078-26-5P 150078-27-6P 150078-28-7P
150078-29-8P 150078-30-1P 150078-31-2P 150078-32-3P 150078-33-4P
150078-34-5P 150078-35-6P 150078-36-7P 150078-37-8P 150078-38-9P
150078-39-0P 150078-40-3P 150078-41-4P 150078-42-5P 150078-43-6P
150078-44-7P 150078-45-8P 150078-46-9P 150078-47-0P 150078-48-1P
150078-49-2P 150078-50-5P 150078-51-6P 150078-52-7P 150078-53-8P
150078-54-9P 150078-55-0P 150078-56-1P 150078-57-2P 150078-58-3P
150078-59-4P 150078-60-7P 150078-62-9P 150078-63-0P 150078-64-1P
150078-65-2P 150078-66-3P 150078-67-4P 150078-68-5P 150078-69-6P
150078-70-9P 150078-71-0P 150078-72-1P 150078-73-2P 150078-74-3P
150078-75-4P 150078-76-5P 150078-77-6P 150078-78-7P 150078-79-8P
150078-80-1P 150078-81-2P 150078-82-3P 150078-83-4P 150078-84-5P
150078-85-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and fungicidal activity of, in control of take-all disease of plants)

IT 150078-87-8P 150078-88-9P 150078-89-0P 150078-90-3P 150078-91-4P
150078-92-5P 150078-93-6P 150078-94-7P 150078-95-8P 150078-96-9P
150078-98-1P 150078-99-2P 150079-00-8P 150079-01-9P 150079-02-0P
150079-03-1P 150079-04-2P 150079-05-3P 150079-06-4P 150079-07-5P
150079-08-6P 150079-09-7P 150079-10-0P 150079-11-1P 150079-12-2P
150079-13-3P 150079-14-4P 150079-15-5P 150079-16-6P 150079-17-7P
150079-18-8P 150079-19-9P 150079-20-2P 150079-21-3P 150079-22-4P
150079-23-5P 150079-24-6P **150108-45-5P** 150108-46-6P
150108-47-7P 150108-48-8P 150108-49-9P 150108-50-2P 150144-98-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and fungicidal activity of, in control of take-all disease of plants)

IT 150079-31-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and intramol. cyclocondensation of)

IT 150079-34-8P 150079-58-6P 150079-69-9P 150079-70-2P 150108-52-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and methylation of)

IT 150079-45-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and oxazoline ring cleavage of, with anhydride)

IT 150079-81-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and oxidn. of)

IT 150108-61-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and oxidn. of, to formyl deriv.)

IT 150108-62-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(prepn. and oxidn. of, with periodate)
IT 150079-75-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with amine)
IT 1946-09-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with benzoyl chloride deriv.)
IT 150079-60-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with cyanoborohydride)
IT 10345-79-6P 66896-65-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with electrophile)
IT 150079-64-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with isopropylamine)
IT 150108-76-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with isopropylhydroxylamine)
IT 150079-62-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with triethylamine, benzenecarboximidothioate from)
IT 87306-63-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with trifluoromethanesulfonic anhydride)
IT 66464-26-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reactions of)
IT 117054-83-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and redn. of, to amine)
IT 14559-12-7P 19156-54-8P 41731-52-6P, Ethyl 2-chloro-4-thiazolecarboxylate 85290-80-8P 139287-38-0P 150079-47-3P 150108-66-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and sapon. of)
IT 5980-28-9P 10366-86-6P 14657-86-4P, N,N-Dipropylbenzamide 15952-65-5P 41116-48-7P 66896-66-0P 69919-07-9P 97010-05-4P 98547-26-3P 124725-22-0P 150079-37-1P 150079-55-3P 150079-61-1P 150079-66-6P 150079-67-7P 150079-68-8P 150079-83-7P 150079-87-1P 150079-91-7P 150079-92-8P 150108-51-3P 150108-53-5P 150108-64-8P 150108-65-9P 150108-68-2P 150108-70-6P 150108-73-9P 150108-74-0P 150108-77-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and silylation of)
IT 150079-71-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and substitution of, with chloride)
IT 52559-62-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and thermal rearrangement of, benzonitrile deriv. from)

IT 134-62-3P 2728-05-4P 35426-69-8P 57547-96-3P 131401-55-3P 150079-33-7P 150079-40-6P 150079-41-7P 150079-42-8P 150079-43-9P 150079-44-0P 150079-54-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and trimethylsilylation of)

IT 91202-03-8P 139287-30-2P 150079-46-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and N-methylation of)

IT 41882-26-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and tert-butoxylation of)

IT 150108-67-1P 150108-69-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 52135-87-2P 142551-31-3P 150079-29-1P 150079-30-4P 150079-32-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate to fungicide compd.)

IT 10271-85-9P, 5-Isothiazolecarboxylic acid 101012-12-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., amidation, and subsequent silylation of)

IT 150079-88-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., deesterification, and arom. silylation of)

IT 121424-94-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., methylation, and fungicidal activity of, in control of take-all disease of plants)

IT 150078-61-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., reactions, and fungicidal activity of, in control of take-all disease of plants)

IT 150078-97-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., redn., and fungicidal activity of, in control of take-all disease of plants)

IT 150078-86-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., thiolation, and fungicidal activity of, in control of take-all disease of plants)

IT 109-97-7, Pyrrole 288-13-1, Pyrazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Et isocyanate)

IT 387-45-1, 2-Chloro-6-fluorobenzaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with azide, chloroanthranil from)

IT 2373-51-5, Chloromethyl methyl sulfide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzamide)

IT 66464-20-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with electrophiles)

IT 609-65-4, 2-Chlorobenzoyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methyleneimine)
IT 109-90-0, Ethyl isocyanate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with pyrrole)
IT 768-33-2, Chlorodimethylphenylsilane 1719-58-0, Dimethyl(vinyl)silyl chloride 3634-56-8, Chloroisopropyldimethylsilane 4028-23-3, Allylchlorodimethylsilane 18162-48-6, tert-Butylchlorodimethylsilane 18162-84-0, Chlorodimethyloctylsilane 71864-47-6, Chlorocyclohexyldimethylsilane 117046-42-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(silylation by, of benzamide)
IT 17306-05-7, Chloromethylphenylvinylsilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(silylation by, of benzamide deriv.)
IT 1719-57-9, (Chloromethyl)dimethylsilyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(silylation by, of benzamides)
IT 75-66-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(thiolation by, of (difluorophenyl)dimethyloxazoline)
IT 40167-20-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(thiolation by, of benzamide deriv.)
IT 50-45-3, 2,3-Dichlorobenzoic acid 88-65-3, 2-Bromobenzoic acid 118-91-2, 2-Chlorobenzoic acid 488-93-7, 3-Furoic acid 614-17-5, N-Ethylbenzamide
RL: RCT (Reactant); RACT (Reactant or reagent)
(trimethylsilylation of)

L199 ANSWER 11 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1993:516522** HCAPLUS
DN **119:116522**
TI Preparation of **alpha-halo enamines** from carboxamides and phosphorus oxychloride or -**bromide**
IN Ghosez, Leon; Koch, Isabelle George
PA Ciba-Geigy A.-G., Switz.
SO Patentschrift (Switz.), 7 pp.
CODEN: SWXXAS
DT Patent
LA German
IC ICM C07C209-74
ICS C07D207-00; C07D211-00; C07D265-28
CC 21-2 (General Organic Chemistry)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CH 681623	A	19930430	CH 1990-3501	19901105

OS CASREACT 119:116522; MARPAT 119:116522
AB A process for the prepn. of .**alpha**.-**chloro** or .**alpha**.-**bromo enamines**, i.e., R1R2C:CXNR3R4 [R1, R2, R3, R4 = various (un)substituted hydrocarbyl groups; or R1R2 = (un)substituted alkylene; or R3R4 = (CH2)4, (CH2)5, CH2CH2OCH2CH2, etc.; R3, R4 may connect to an addnl. **enamine** moiety; X = Cl, Br], comprises treatment of carboxamides having an .**alpha**.-hydrogen to the carbonyl group, i.e., R1R2CHC(O)NR3R4, with POCl3 or POBr3, resp., first in the presence of a catalytic amt. of an N,N-disubstituted amide (formamide or .**alpha**.-methylenic carboxamide), or an N-substituted .**alpha**.-methylenic lactam, and then in the presence of a **tertiary amine**,. E.g., 1-(dimethylamino)-1-**chloro**-2-methylprop-1-ene was prepd. from POCl3 and N,N,2-trimethylpropionamide in CH2Cl2 in the presence of a small amt. of DMF, in the subsequent presence of Et3N, in 90% yield.

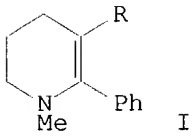
ST **enamine alpha halo**; carboxamide conversion
chloro enamine phosphorus oxychloride; amide conversion
bromo enamine phosphorus oxybromide
IT Amides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, with phosphorus oxyhalides, **.alpha.-halo enamines** from)
IT **Enamines**
RL: SPN (Synthetic preparation); PREP (Preparation)
(**halo**, prepn. of, from carboxamides and phosphorus oxyhalides)
IT **26189-59-3P 58933-80-5P 58933-81-6P 60180-60-1P 65785-45-7P 72184-21-5P 72184-22-6P 73630-93-0P 87443-04-7P 116437-56-0P 149554-68-7P 149554-69-8P 149554-70-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 957-51-7 6282-98-0 17566-51-7 18071-39-1 18940-58-4 21678-37-5 33931-47-4 55577-65-6 149554-71-2 149554-72-3 149554-73-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with phosphorus oxyhalide, **.alpha.-halo enamine** from)

L199 ANSWER 12 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1990:98997 HCAPLUS
DN 112:98997
TI Preparation of glycosyl halides under neutral conditions
AU Ernst, Beat; Winkler, Tammo
CS Cent. Res. Lab., Ciba-Geigy Ltd., Basel, CH 4002, Switz.
SO Tetrahedron Lett. (1989), 30(23), 3081-4
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
CC 33-2 (Carbohydrates)
OS CASREACT 112:98997
AB The anomeric hydroxyl group of various furanose and pyranose hemiacetals can be replaced by a **fluorine**, **chlorine**, **bromine** or **iodine** atom under neutral conditions using **haloenamines**. Thus, 2,3,4,6-tetra-O-benzyl-D-glucopyranose was treated with Me2C:C(NMe2)Cl in CHCl3 for 6 h to give 92% 2,3,4,6-tetra-O-benzyl-.**alpha**.-D-glucopyranosyl **chloride**
.
ST glycosyl halide; **halogenation** furanose pyranose **haloenamine**; **enamine halo halogenation** pyranose
IT **Halogenation**
(of glycopyranose and glycofuranoses with **haloenamines**)
IT Carbohydrates and Sugars, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(glycosyl halides, prepn. of, under neutral conditions)
IT **26189-59-3 65560-29-4 65560-41-0 65785-54-8 73630-93-0**
RL: RCT (Reactant)
(**halogenation** by, of glycopyranose or glycofuranoses)
IT 38768-81-9 40036-82-6 40437-08-9 58645-20-8 77668-10-1 125181-26-2
RL: RCT (Reactant)
(**halogenation** of, with **haloenamines**)
IT 440-03-9P 572-09-8P 2823-44-1P 2823-46-3P 3934-29-0P 4196-35-4P 4451-35-8P 6919-97-7P 13035-49-9P 13242-53-0P 14227-51-1P 14227-66-8P 14257-40-0P 17087-84-2P 20720-33-6P 21085-72-3P 25320-59-6P 38838-12-9P 53008-62-1P 57573-38-3P 78153-79-4P

89025-46-7P 94898-41-6P 96089-62-2P 108800-87-9P 116523-80-9P
125181-24-0P 125181-25-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L199 ANSWER 13 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1985:131224 HCAPLUS
DN 102:131224
TI A development of highly selective synthetic reactions via iminium salts
AU Fujisawa, Tamotsu; Sato, Toshio
CS Fac. Eng., Mie Univ., Tsu, 514, Japan
SO Kenkyu Hokoku - Asahi Garasu Kogyo Gijutsu Shoreikai (1984), 44, 83-94
CODEN: AGKGAA; ISSN: 0365-2599
DT Journal; General Review
LA Japanese
CC 21-0 (General Organic Chemistry)
AB A review with 14 refs. on the use of **haloiminium** salts or . **alpha.-haloenamines** as condensation reagents for chemoselective reactions of activated carboxylic acids, nitroalkanes, and alcs.
ST review iminium salt reaction
IT Iminium compounds
RL: RCT (Reactant)
(synthetic reactions via)

L199 ANSWER 14 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1983:179443 HCAPLUS
DN 98:179443
TI .beta.-Lithiated **enamines**. I. Preparations and alkylation reactions
AU Duhamel, Lucette; Poirier, Jean Marie
CS Lab. Chim. Org., Fac. Sci. Tech. Rouen, Mont-Saint-Aignan, F-76130, Fr.
SO Bull. Soc. Chim. Fr. (1982), (9-10, Pt. 2), 297-303
CODEN: BSCFAS; ISSN: 0037-8968
DT Journal
LA French
CC 29-2 (Organometallic and Organometalloidal Compounds)
OS CASREACT 98:179443
GI



I

AB Treating .beta.-**bromoenamine** with Me3CLi or BuLi in THF at -70.degree. gave .beta.-**lithioenamine** via **halogen** -metal exchange. Thus, treating MeCBr:CHNEt2 or II (R = Br) with Me3CLi gave MeCLi:CHNEt2 or I (R = Li), resp. Use of metallic Li instead of organolithium reagents resulted in the formation of small amts. of byproducts. Treating Me2NCPh:CHCl with R1Li (R1 = Bu, Me3C) gave Me2NCPh:CR1Cl, which reacted with electrophiles to form the substituted **enamines**. The .beta.-**lithioenamines** studied are stable compds. even up to 20.degree. in most cases. Their reactions to form .beta.-substituted **enamines**, or by hydrolysis, .**alpha** .-substituted carbonyl compds., were studied.
ST **enamine bromo** lithiation; **lithioenamine** reaction
IT Stereochemistry

(of reaction of .beta.-**lithioenamine** with alkyl halides)
IT Lithiation
(of .beta.-**haloenamines**)
IT Alkylation
(of .beta.-**lithioenamines**)
IT Carbonyl compounds, preparation
RL: PREP (Preparation)
(.**alpha.**-substituted, by hydrolysis of **enamines**)
IT **Enamines**
RL: RCT (Reactant)
(.beta.-**halo-**, lithiation of)
IT 76906-47-3 85429-47-6
RL: PRP (Properties)
(NMR spectrum of)
IT 74-88-4, reactions 75-03-6 542-69-8
RL: RCT (Reactant)
(alkylation by, of .beta.-**lithioenamine**)
IT 14548-16-4
RL: RCT (Reactant)
(**bromination** and reaction with butyllithium)
IT 7439-93-2, reactions
RL: RCT (Reactant)
(lithiation by, of .beta.-**bromoenamine**)
IT 594-19-4 109-72-8P, preparation
RL: RCT (Reactant)
(lithiation by, of .beta.-**haloenamines**)
IT 21411-45-0 61170-34-1 61214-42-4 65174-17-6 71129-92-5
76906-37-1 76906-48-4 85429-28-3 85429-29-4 85429-30-7
RL: RCT (Reactant)
(lithiation of, by alkyllithium reagents)
IT 85429-48-7P 85437-49-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with electrophiles)
IT 85429-35-2P 85429-36-3P 85429-37-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of)
IT 93-55-0P 564-04-5P 942-92-7P 1590-08-5P 17180-39-1P 22502-84-7P
27610-88-4P 33119-75-4P 57847-43-5P 71130-00-2P 84395-66-4P
85429-31-8P 85429-32-9P 85429-33-0P 85429-34-1P 85429-38-5P
85429-39-6P 85429-40-9P 85429-41-0P 85429-42-1P 85429-43-2P
85429-44-3P 85429-45-4P 85429-46-5P 85429-49-8P 85429-50-1P
85429-51-2P 85429-52-3P 85429-53-4P 85429-54-5P 85429-55-6P
85429-56-7P 85429-57-8P 85429-58-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 30263-73-1
RL: RCT (Reactant)
(prepn. of **bromoenamine** from)
IT 7784-34-1
RL: RCT (Reactant)
(reaction of, with **bromodimethylbutanal, bromoenamine** from)
IT 6596-96-9
RL: RCT (Reactant)
(reaction of, with **chloroacetophenone**)
IT 532-27-4
RL: RCT (Reactant)
(reaction of, with tris(dimethylamino)arsine)

L199 ANSWER 15 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1982:492398 HCAPLUS
DN 97:92398
TI Stereospecific **halogenation** of ethyl methyl phosphorothioates

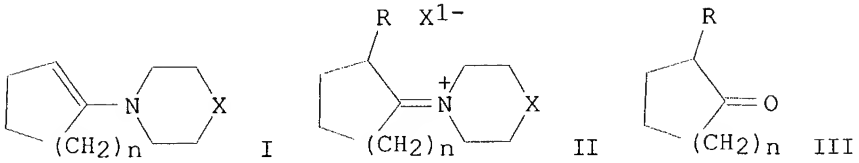
AU Hall, C. Richard; Williams, Nancy E.
CS Chem. Def. Establ., Salisbury, SP4 0JQ, UK
SO Tetrahedron Lett. (1982), 23(9), 999-1002
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 22, 23
OS CASREACT 97:92398
AB The stereospecific **halogenation** of (R)-(+)-HSP(O)(OMe)OEt (I) with tetramethyl-.**alpha.**-**haloenamines** is reported. Treating I with Me2C:CRNMe2 (R = F, Cl, Br) gave (S)-(+)-RP(O)(OEt)OMe (II; same R) stereospecifically, together with Me2CHCSNMe2. The reaction mechanism is discussed. The stereochem. of the substitution reactions of the phosphoryl halides II was studied. E.g., substitution reaction of II (R = Cl) with NaOPh gave enantiomerically pure (R)-(+)-PhOP(O)(OEt)OMe, whereas that of II (R = Cl) with NaON:CMe2 gave (R)-(-)-Me2C:NOP(O)(OMe)OEt, which underwent substitution reaction with NaOCHMe2 to give (S)-(+)-Me2CHOP(O)(OMe)OEt.
ST **halogenation** phosphorothioate **haloenamine** stereospecificity; substitution phosphoryl halide stereochem; **enamine halo halogenation** phosphorothioate
IT **Halogenation**
(of Et Me phosphorothioate with **tetramethylhaloenamines**, stereospecific)
IT Stereochemistry
(of **halogenation** of Et Me phosphorothioates with **tetramethylhaloenamines**)
IT Substitution reaction, nucleophilic
(of phosphoryl halides with phenoxide ion and acetone oxime, stereochem. of)
IT **Enamines**
RL: RCT (Reactant)
(**halo**, **halogenation** of Et Me phosphorothioate with, stereospecific)
IT **26189-59-3 65560-29-4 73630-93-0**
RL: RCT (Reactant)
(**halogenation** of Et Me phosphorothioate with, stereospecific)
IT 71348-05-5
RL: RCT (Reactant)
(**halogenation** of, with tetramethyl-.**alpha.**-**haloenamines**, stereospecific)
IT 82765-14-8P 82765-15-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and methylation of)
IT 82765-13-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and substitution reaction of, with isopropoxide)
IT 71348-14-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and substitution reactions of, stereospecificity of)
IT 52912-63-7P 57557-25-2P 71348-16-8P 82765-12-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 64415-67-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by substitution reaction of phosphoryl **chloride** with phenoxide, stereospecificity of)
IT 57557-32-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by substitution reactions of phosphoryl **chloride**, stereospecificity of)
IT 71348-06-6

RL: RCT (Reactant)
(substitution reactions of, stereospecific)
IT 139-02-6 683-60-3 824-78-2 75392-06-2
RL: RCT (Reactant)
(substitution reactions of, with phosphoryl **chlorides**, stereospecific)

L199 ANSWER 16 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1980:567532** HCAPLUS
DN **93:167532**
TI **.alpha.-Chloro enamines, reactive intermediates** for **synthesis**: 1-**chloro**-N,N,2-trimethylpropenylamine
AU Haveaux, B.; Dekoker, A.; Rens, M.; Sidani, A. R.; Toye, J.; Ghosez, L.
CS Lab. Chim. Org. Synth., Univ. Louvain, Louvain-La-Neuve, B-1348, Belg.
SO Org. Synth. (1980), 59, 26-34
CODEN: ORSYAT; ISSN: 0078-6209
DT Journal
LA English
CC 23-4 (Aliphatic Compounds)
AB RR1C:CClNR2R3 [R = Me, Ph, H, R1 = H, R2 = Me, R3 = Ph; R = Me3C, Me, Ph, R1 = H, Me, R2 = R3 = Me; R = R1 = Me, R2R3 = (CH2)5; RR1 = (CH2)5, R2R3 = Et; R = Me, R1 = Cl, R2R3 = (CH2)4; R = R3 = Me, R1R2 = (CH2)4] were prepd. in 40-85% yields by treating RR1CHCONR2R3 with COCl2 to give RR1CHCCl:N+R2R3.Cl-, which was refluxed in CH2Cl2 in the presence of Et3N for 1 h.
ST alkylamide **chlorination** phosgene safety; **chloroenamine**; **enamine chloro**; **chloroalkylidenium chloride** prepn dehydrochlorination
IT Amides, reactions
RL: RCT (Reactant)
(**chlorination** of, by phosgene, **.alpha.-chloroenamine** from)
IT Safety
(in handling of phosgene)
IT **Enamines**
(**.alpha.-chloro**, prepn. of, from amides)
IT 75-44-5
RL: RCT (Reactant)
(**chlorination** of alkylamide by)
IT 563-83-7 579-10-2 5461-52-9 5827-78-1 17201-04-6 26153-90-2 40669-47-4 41836-85-5 55577-65-6 55917-05-0 **75115-52-5**
RL: RCT (Reactant)
(**chlorination** of, by phosgene)
IT **52851-35-1P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation)
(prepn. and dehydrochlorination of)
IT **23150-97-2P 26189-59-3P 58933-81-6P 65785-52-6P 65785-53-7P 74044-20-5P 75115-53-6P 75115-54-7P 75115-55-8P 75115-56-9P 75115-57-0P 75115-58-1P 75115-59-2P 75115-60-5P 75125-74-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L199 ANSWER 17 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1979:438957** HCAPLUS
DN **91:38957**
TI **Halogenation** of **enamines** - synthesis of .beta.-**halo** iminium halides
AU Seufert, Walter; Effenberger, Franz
CS Inst. Org. Chem., Univ. Stuttgart, Stuttgart, D-7000/80, Fed. Rep. Ger.

SO Chem. Ber. (1979), 112(5), 1670-6
CODEN: CHBEAM; ISSN: 0009-2940
DT Journal
LA German
CC 24-1 (Alicyclic Compounds)
GI



I II III

AB The **enamines** I (X = bond, CH2, O; n = 1, 2, 3) reacted with Br, Cl, or **iodine** to give the iminium halides II (X1 = R = Cl, Br, I), which were hydrolyzed to the **.alpha.-halo** ketones III.

ST **halogenation** aminocycloalkene; iminium halide **halocycloalkane**; cycloalkanone **halo**

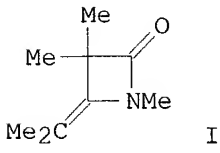
IT **Halogenation**
(of aminocycloalkanones, iminium halide from)

IT 670-80-4 936-52-7 1125-99-1 1614-92-2 2981-10-4 7148-07-4 7182-08-3 14092-11-6 19353-04-9
RL: RCT (Reactant)
(**halogenation** of, iminium halide from)

IT 70742-75-5P 70742-76-6P 70742-77-7P 70742-78-8P 70742-79-9P 70742-80-2P 70742-81-3P 70742-82-4P 70742-83-5P 70742-84-6P 70742-85-7P 70742-86-8P 70742-87-9P 70742-88-0P 70742-89-1P 70742-90-4P 70742-91-5P 70742-92-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and hydrolysis of)

IT 694-28-0P 766-65-4P 766-66-5P 822-85-5P 822-87-7P 21943-50-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by hydrolysis of **haloiminium** halide)

L199 ANSWER 18 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1978:104640 HCAPLUS
DN 88:104640
TI Reactivity and synthetic potential of **.alpha.-fluoro-** and **.alpha.-iodoenamines**
AU Colens, Alain; Ghosez, Leon
CS Lab. Chim. Synth., Univ. Louvain, Louvain, Belg.
SO Nouv. J. Chim. (1977), 1(5), 371-2
CODEN: NJCHD4
DT Journal
LA English
CC 23-18 (Aliphatic Compounds)
GI



I

AB The nucleophilic character of .alpha.-**fluoroenamines** and the electrophilic character of .alpha.-**iodoenamines** was shown. E.g., Me2C:CFNMe2 reacted with Me2C:CINMe2 in HCCl3 at 20.degree. to give, after hydrolysis, the .beta.-lactam I.
ST nucleophilicity **fluoroenamine**; electrophilicity **iodoenamine**; **enamine halo** reaction; lactam beta isopropylidene
IT Electrophilicity
Nucleophilicity
(of .alpha.-**haloenamines**)
IT Amines, reactions
(.alpha.-**haloenamines**, reactions of, electro- or nucleophilic character in)
IT **65560-33-0**
RL: RCT (Reactant)
(condensation of, with malononitrile)
IT 109-77-3
RL: RCT (Reactant)
(condensation of, with .alpha.-**fluoroenamine**)
IT **65560-30-7**
RL: RCT (Reactant)
(hydrofluorination of)
IT 65799-99-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and hydrolysis of)
IT 50483-91-5P 55019-20-0P 65560-31-8P 65560-32-9P 65560-34-1P 65560-35-2P 65560-36-3P **65560-38-5P** 65560-39-6P 65560-40-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 75-44-5 79-37-8 421-20-5
RL: RCT (Reactant)
(reaction of, with .alpha.-**fluoroenamine**)
IT **65560-29-4** **65560-41-0**
RL: RCT (Reactant)
(reactions of)

L199 ANSWER 19 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1978:104595** HCAPLUS
DN **88:104595**
TI **Synthesis** of .alpha.-**fluoro**- and .alpha.-**iodoenamines**
AU Colens, Alain; Demuylder, Michel; Techy, Brigitte; Ghosez, Leon
CS Lab. Chim. Org. Synth., Univ. Louvain, Louvain, Belg.
SO Nouv. J. Chim. (1977), 1(5), 369-70
CODEN: NJCHD4
DT Journal
LA English
CC 23-3 (Aliphatic Compounds)
AB RCR1:C(NR2R3)Cl [R and R1 (same or different) are Me, Ph, Et, Cl; R2 and R3 (same or different) are Me, CHMe2, Ph; and NR2R3 = morpholino] were treated with KF and KI to give the resp. RCR1:C(NR2R3)F and RCR1:C(NR2R3)I.
ST **chlorovinylamine halogen** exchange; **enamine chloro halogen** exchange; **fluoro enamine**; **iodo enamine**
IT Exchange reaction
(**halogen**, of N-(1-**chlorovinyl**)dialkylamines with potassium **fluoride** and potassium **iodide**)
IT 4231-35-0
RL: RCT (Reactant)
(addn. reaction of, with potassium **fluoride**)

IT **58933-80-5 65785-48-0 65785-49-1**
65785-50-4 65785-51-5 65785-52-6
65785-53-7
RL: RCT (Reactant)
(**halogen** exchange reaction of, with potassium **fluoride**)
IT **26189-59-3 65785-45-7 65785-46-8**
65785-47-9
RL: RCT (Reactant)
(**halogen** exchange reaction of, with potassium **fluoride** and potassium **iodide**)
IT **65560-29-4P 65560-33-0P 65560-41-0P**
65785-54-8P 65785-55-9P 65785-56-0P
65785-57-1P 65785-58-2P 65785-59-3P
65785-60-6P 65785-61-7P 65785-62-8P
65785-63-9P 65785-64-0P 65785-65-1P
65785-66-2P 65785-67-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L199 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1978:22789** HCAPLUS
DN **88:22789**
TI **Halogenation** of **enamines**. I. **Synthesis** of **haloketones** from **enamines**. .alpha.-**Halogenated** pinacolones
AU Carlson, Rolf; Rappe, Christoffer
CS Dep. Org. Chem., Univ. Umea, Umea, Swed.
SO Acta Chem. Scand., Ser. B (1977), B31(6), 485-90
CODEN: ACBOCV
DT Journal
LA English
CC 28-14 (Heterocyclic Compounds (More Than One Hetero Atom))
AB The reactions of 2-morpholino-3,3-dimethyl-1-butene (I) with Cl and Br were studied under varying conditions for possible transformations to mono- and dihalo ketones. 1-**Chloro**-3,3-dimethyl-2-butane was prepd. in 42% yield by this method. The usefulness and limitations of the reaction of I with **halogens** for obtaining **halo** ketones were briefly discussed.
ST **enamine halogenation**; morpholinodimethylbutene **halogenation**
IT **Halogenation**
(of morpholinodimethylbutene)
IT 5469-26-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and **chlorination** by sulfuryl **chloride**)
IT 22502-84-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and **halogenation** of)
IT 13547-70-1P 22591-21-5P 30263-65-1P 36965-30-7P 64984-95-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 75-97-8
RL: RCT (Reactant)
(reaction of, with morpholine and titanium **chloride**)
IT 110-91-8, reactions
RL: RCT (Reactant)
(reaction of, with pinacolone and titanium **chloride**)

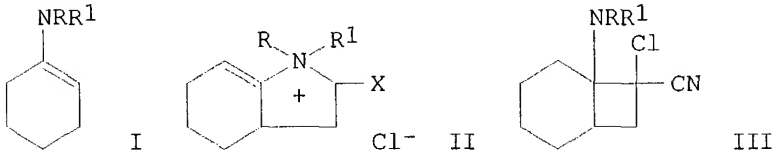
L199 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1977:139743** HCAPLUS
DN **86:139743**
TI **Enamine** chemistry. XV. The reaction of **enamines** with

.**alpha**.-**halo** electrophilic olefins

AU Madsen, J. O.; Lawesson, S. O.
CS Chem. Inst., Univ. Aarhus, Aarhus, Den.

SO Bull. Soc. Chim. Belg. (1976), 85(10), 805-17
CODEN: BSCBAG
DT Journal
LA English
CC 27-11 (Heterocyclic Compounds (One Hetero Atom))

GI



I II III

AB Reaction of **enamines** I (RR1 = (CH2)2O(CH2)2, (CH2)5, (CH2)4, (CH2)6, (CH2)4CHMe; R = R1 = Me, Et, Bu, Me2CHCH2; R = Me, R1 = Me2CHCH2, cyclohexyl; R = Et, R1 = Bu) with H2C:CXCl (X = CN, CO2Me) in polar solvents gave 25-80% indoliums II. In ether at low temp. III were obtained. The pyrrolidine and hexahydroazepine **enamines** were the most reactive and the morpholine **enamines** were the least reactive. II were stable toward bases. Heating III in MeCN gave II.

ST **enamine** cyclocondensation electrophilic olefin; indolium salt; cyclohexanone **enamine** reaction **chloroacrylate**

IT **Enamines**
RL: RCT (Reactant)
(cycloaddn. reaction of, with .**alpha**.-**halo** electrophilic olefins)

IT Alkenes, reactions
(.**alpha**.-**halo**, reaction of, with **enamines**)

IT 54749-68-7P 62372-36-5P 62372-44-5P 62372-49-0P 62372-50-3P
62372-51-4P 62372-52-5P 62372-53-6P 62372-54-7P 62372-55-8P
62372-56-9P 62372-57-0P 62372-58-1P 62372-74-1P 62372-75-2P
RL: PREP (Preparation)
(from cyclohexanone **enamine** reaction with electrophilic **halogenated** olefins)

IT 19406-08-7P 62372-69-4P 62372-70-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to indolium salts)

IT 61581-04-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of with acrylonitrile)

IT 49651-43-6P 53516-50-0P 53516-56-6P 62372-47-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with **chloroacrylonitrile**)

IT 20215-83-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and redn. of)

IT 51265-33-9P 54749-67-6P 62372-38-7P 62372-40-1P 62372-43-4P
62372-60-5P 62372-62-7P 62372-64-9P 62372-65-0P 62372-66-1P
62372-68-3P 62372-71-8P 62372-72-9P 62372-73-0P 62372-76-3P
62573-47-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 10468-24-3 10468-25-4 13815-46-8 23430-63-9 62372-48-9
RL: RCT (Reactant)
(reaction of, with **chloroacrylonitrile**)

IT 670-80-4
RL: RCT (Reactant)
(reaction of, with **chloroacrylonitrile** and methyl **chloroacrylate**)
IT 80-63-7 920-37-6
RL: RCT (Reactant)
(reaction of, with cyclohexanone **enamines**)
IT 1125-99-1 2981-10-4
RL: RCT (Reactant)
(reaction of, with methyl **chloroacrylate**)

L199 ANSWER 22 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1977:105179 HCAPLUS
DN 86:105179
TI .**alpha.-Haloenamines** and keteniminium salts
AU Ghosez, L.; Marchand-Brynaert, J.
CS Lab. Chim. Org. Synth., Univ. Louvain, Louvain-la-Neuve, Belg.
SO Adv. Org. Chem. (1976), 9, Pt. 1(Iminium Salts Org. Chem.), 421-532
CODEN: AOMRA7
DT Journal; General Review
LA English
CC 22-0 (Physical Organic Chemistry)
AB A review with 127 refs.
ST review **haloenamine** keteniminium salt; **enamine halo** review
IT Ketenimines
RL: RCT (Reactant)
(ions, reactions of)
IT **Enamines**
(.**alpha.-halo**, prepn., reactions, and properties of)

L199 ANSWER 23 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1976:16445 HCAPLUS
DN 84:16445
TI Action of nucleophilic reagents on .beta.-**haloenamines**
AU Duhamel, Lucette; Poirier, Jean M.
CS Lab. Chim. Org., Fac. Sci. Tech. Rouen, Mont-Saint-Aignan, Fr.
SO Bull. Soc. Chim. Fr. (1975), (1-2, Pt. 2), 329-32
CODEN: BSCFAS
DT Journal
LA French
CC 22-3 (Physical Organic Chemistry)
AB RCX:CHNR12 (I, R = R1 = Et, X = Cl) (II) and MeOH-Et3N gave 60% RCH(NR12)CH(OMe)2 (III, R = R1 = Et). II and EtSH contg. Et3N gave 50% RC(SEt):CHNR12 (R = R1 = Et). I (R = Me3C, NR12 = morpholino, X = Cl) with piperidine gave 95% RC(NR12):CHNR22 (IV, R12N = piperidino) and 5% IV (R12N = morpholino). Treatment of I (R = Me2C, R1 = Me, X = Cl) with Me3CNH2 gave 55% Me3CCHClCH:NCMe3. III were also prepd. from the corresponding .**alpha.-halo** iminium salts, which were intermediates in these reactions, and the alcs. The mechanism of these reactions was discussed.
ST addn nucleophile **haloenamine**; **enaminehalo** addn nucleophile
IT Amines, reactions
RL: RCT (Reactant)
(addn., with .beta.-**haloenamines**)
IT Addition reaction
(of .beta.-**haloenamines**, with nucleophiles, mechanism of)
IT 75-64-9 108-91-8
RL: RCT (Reactant)
(addn. reaction of, with .beta.-**haloenamines**)
IT 27971-16-0 27971-18-2 27971-19-3 27971-20-6 27971-22-8

27971-24-0 27974-33-0 35593-04-5 35593-06-7 35593-07-8
35593-09-0 35593-13-6
RL: RCT (Reactant)
(addn. reaction of, with nucleophiles)
IT 67-56-1, reactions 107-21-1, reactions
RL: RCT (Reactant)
(addn., with .beta.-**haloenamines**)
IT 14865-53-3P 23588-56-9P 25386-76-9P 30269-19-3P 30269-20-6P
34683-59-5P 39618-73-0P 39618-74-1P 57559-13-4P 57559-15-6P
57559-16-7P 57559-17-8P 57559-18-9P 57559-19-0P 57559-20-3P
57559-21-4P 57559-22-5P 57559-23-6P 57559-24-7P 57559-25-8P
57579-03-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 75-08-1
RL: RCT (Reactant)
(reaction of, with .beta.-**haloenamines**)
IT 16826-16-7
RL: RCT (Reactant)
(reaction of, with **bromine**)
IT 57559-14-5
RL: RCT (Reactant)
(reaction of, with methanol)
IT 7726-95-6, reactions
RL: RCT (Reactant)
(with (diethylamino)isobutene)

L199 ANSWER 24 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1975:16254** HCAPLUS
DN **82:16254**
TI .**alpha.-Chloroenamines. New reagents** for organic **synthesis**
AU Ghosez, Leon
CS Lab. Chim. Org. Synth., Univ. Cathol. Louvain, Louvain, Belg.
SO Angew. Chem., Int. Ed. Engl. (1972), 11(9), 852-3
CODEN: ACIEAY
DT Journal
LA English
CC 23-4 (Aliphatic Compounds)
Section cross-reference(s): 27
GI For diagram(s), see printed CA Issue.
AB R1CR2:CClNR3R4 (I; R1 = alkyl, aryl, H2C:CH; R2 = H, alkyl; R3, R4 = alkyl, cycloalkyl), with an electron donating group and a suitable leaving group on a sp2 C had versatile chem. behavior. I reacted with N3- via R1CR2:-C:N+R3R4 (II) to give azirines III. Reaction of furan or pyrrole with II resulted in aminoalkenylation to give IV (X = O, NH). Reaction of II with H2C:CH2 gave high yields of cyclobutanes V. I reacted with Br (followed by H2O) to give R1CR2BrCONR3R4. Reaction of I with Mg gave R1CR2:C(MgCl)NR3R4 which were hydrolyzed to R1CR2:CHNR3R4 or were coupled with I to give R1CR2:C(NR3R4)C(NR3R4):CR1R2.
ST **chloroenamine; enamine chloro;** vinylamine **chloro;** azirine amino; furan aminovinyl; pyrrolidine aminovinyl
IT Alkenes, reactions
RL: RCT (Reactant)
(with **chloroenamines**)
IT **Ethenamine**, 1-**chloro**-, derivs.
RL: RCT (Reactant)
(new reagents for org. synthesis)
IT **Ethenamine**, magnesium complex, derivs.
Magnesium, (1-aminoethenyl)**chloro**-, derivs.
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of)
IT 1,3-Butadiene-2,3-diamine, derivs.

2-Furanmethanamine, .**alpha**.-methylene-, derivs.
Acetamide, 2-**bromo**-, derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT Ethenimine, derivs.
RL: RCT (Reactant)
(reactions of)
IT 54786-32-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 110-00-9 123-75-1 54376-55-5 54376-56-6
RL: RCT (Reactant)
(reaction of, with **chloroenamines**)
IT 74-85-1, reactions
RL: RCT (Reactant)
(with **chloroenamines**, cyclobutanes from)

L199 ANSWER 25 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1974:437309 HCAPLUS
DN 81:37309
TI Chemistry of small ring compounds. 24. Improved synthesis of aminals of bicyclo[3.1.0]hexan-6-one and bicyclo[4.1.0]heptan-7-one
AU Jongejan, E.; Steinberg, H.; De Boer, Th. J.
CS Lab. Org. Chem., Univ. Amsterdam, Amsterdam, Neth.
SO Syn. Commun. (1974), 4(1), 11-16
CODEN: SYNCAV
DT Journal
LA English
CC 24-7 (Alicyclic Compounds)
GI For diagram(s), see printed CA Issue.
AB **Enamines** (I; n = 1,2) were prepd. in 85 and 82% yield, resp., by reaction of .**alpha**.-**bromocyclohexanone** and -cycloheptanone with Me2NH and TiCl4. Reaction of I with a Me2NH-AgBF4 complex gave the corresponding aminals (II) in almost quant. yield.
ST bicyclohexanone aminal; bicycloheptanone aminal; cycloalkanone **enamine** cyclization
IT **Amines**, preparation
RL: PREP (Preparation)
(**enamines**, cyclic .**alpha**.-**halo**)
IT Aminals
RL: RCT (Reactant)
(of bicyclohexanone and bicycloheptanone)
IT 52999-06-1P 52999-07-2P 52999-08-3P 52999-09-4P 52999-11-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 766-65-4
RL: RCT (Reactant)
(reaction of, with dimethylamine and titanium **chloride**)
IT 822-85-5
RL: RCT (Reactant)
(reaction of, with dimethylamine and titanium **chloride**, **enamine** from)
IT 124-40-3, reactions
RL: RCT (Reactant)
(with **bromocycloheptanone** and titanium **chloride**, **enamine** from)
IT 7550-45-0, reactions
RL: RCT (Reactant)
(with dimethylamine and **bromocycloheptanone**, **enamine** from)

L199 ANSWER 26 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1974:47377 HCAPLUS

DN 80:47377
TI Action of **halogens** on **enamines** and .beta.-**halo enamines**. Route to .beta.-**halo enamines** and .**alpha**.,.**alpha**.-dihalo aldehydes
AU Duhamel, Lucette; Duhamel, Pierre; Poirier, Jean M.
CS Lab. Chim. Org., Fac. Sci. Tech. Rouen, Mont-Saint-Aignan, Fr.
SO Tetrahedron Lett. (1973), (43), 4237-40
CODEN: TELEAY
DT Journal
LA French
CC 23-4 (Aliphatic Compounds)
AB The .beta.-**halo enamines** RR1C:CR2R3 (R = Et, R1 = Cl, R2 = H, R3 = NEt2; R = H, R1 = Cl, Br, R2 = CMe3, R3 = morpholino) were prepd. from RCH:CR2R3 by reaction with **halogen** and treatment of the .**alpha**.-**halo** immonium halide with NEt3. RR1C:CHR2 [R = Et, R1 = Cl, R2 = NEt; R = (CH2)4Me, CMe3, R1 = Cl, R2 = morpholino; R = CMe3, R1 = Br, R2 = piperidino] with **halogen** gave .**alpha**.,.**alpha**.-dihalo immonium salts which hydrolyzed to RCR1R2CHO [R = Et, CMe3, R1 = Cl, R2 = Cl, Br; R = (CH2)4Me, R1 = R2 = Cl; R = CMe3, R1 = R2 = Br].
ST **enamine halo**; **halo** aldehyde; **halogen** addn **enamine**
IT 15430-99-6 22502-84-7 27971-18-2 35593-10-3
RL: RCT (Reactant)
(**halogenation** of)
IT 1937-09-3P 22518-16-7P 23454-01-5P 34342-17-1P 35593-04-5P 50735-71-2P 51042-97-8P 51042-98-9P 51094-53-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 7726-95-6, *reactions* 7782-50-5, *reactions*
RL: RCT (Reactant)
(with **enamines** and .beta.-**haloenamines**)

L199 ANSWER 27 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1972:514325** HCAPLUS
DN **77:114325**
TI .**alpha**.-**Halogenated amines**. 44. Reaction of **enamines** with dialkylmethyleniminium halides
AU Boehme, Horst; Osmers, Knut; Wagner, Peter
CS Pharm.-Chem. Inst., Univ. Marburg/Lahn, Marburg/Lahn, Ger.
SO Tetrahedron Lett. (1972), (27), 2785-6
CODEN: TELEAY
DT Journal
LA German
CC 28-14 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 27, 22
AB Morpholinopivalaldehyde (I) was obtained by treating N-(**chloromethyl**)morpholine (II) with 1-morpholinoisobtene (III), N-(**chloromethyl**)piperidine with III, or II with 1-piperidinoisobutene and hydrolysis. The intermediate iminium salt (R2NCH2CMe2CH:NR21+Cl-, R2N = piperidino, R21N = morpholino) underwent an intramol. hydride shift to R21NCH2CMe2CH:NR2+Cl-, which was hydrolyzed to I.
ST **enamine** iminium halide addn; morpholinopivalaldehyde
IT **Amines**, reactions
Amines, reactions
RL: RCT (Reactant)
(**enamines**, with dialkylmethyleniminium halides)
IT Methanimine, quaternary halides
RL: RCT (Reactant)
(reaction of, with **enamines**)
IT Methanimine, quaternary derivs.
RL: RCT (Reactant)
(reaction with **enamines**)

IT 23588-51-4P 37591-27-8P 37810-60-9P 37810-63-2P 37810-64-3P
37810-65-4P 37810-66-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 2403-55-6
RL: RCT (Reactant)
(reaction with **chloromethylamines**)
IT 673-33-6
RL: RCT (Reactant)
(reaction with **chloromethylmorpholine**)
IT 16158-87-5 16158-88-6
RL: RCT (Reactant)
(reaction with morpholinoisobutene)

L199 ANSWER 28 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1972:113145 HCAPLUS
DN 76:113145
TI .beta.-**Halo enamines**. Synthesis from .**alpha**
.-**chloro**-, .**alpha**.-**bromo**-, or .**alpha**
.-**iodoaldehydes**
AU Duhamel, Lucette; Duhamel, Pierre; Poirier, Jean M.
CS Lab. Chim. Org., Fac. Sci. Rouen, Mont-Saint-Aignan, Fr.
SO Bull. Soc. Chim. Fr. (1972), (1), 221-6
CODEN: BSCFAS
DT Journal
LA French
CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 27, 23
AB Twenty-five .beta.-**halo enamines** RC(X):CHNR12 [R = Et,
n-pentyl, Me2CCH2, Me3C; X = Cl, Br, I; NR12 = NEt2, NPr2, piperidino,
morpholino, 1-pyrrolidinyl, NMe2, N(Me)Ph] were prepd. by treatment of
.beta.-**haloaldehydes** with As(NR12)3 or with AsCl3, SbCl3, BiCl3,
AlCl3 or TiCl4 in the presence of a secondary amine. A soln. of
tripiperidinoarsine in anhyd. benzene was added dropwise to a soln. of 2-
chlorobutanal in Et2O at 5-10.degree. and the mixt. stirred 0.5 hr
and kept overnight at -30.degree. to give 2-**chloro**
-1-piperidino-1-butene. A soln. of Et2NH in Et2O was added to a mixt. of
2-**bromoneohexanal** in anhyd. Et2O and AsCl3 in anhyd. benzene at
5-10.degree. and the mixt. stirred 0.5 hr and kept overnight at 30.degree.
to give 2-**bromo**-1-diethylamino-3,3-dimethyl-1-butene.
ST **enamine halo**
IT **Amines**, preparation
RL: PREP (Preparation)
(**enamines**, from **haloaldehydes**)
IT Aldehydes, reactions
RL: SPN (Synthetic preparation); PREP (Preparation)
(**halo**, prepn. of **halo enamines** from)
IT 27971-16-0P 27971-17-1P 27971-18-2P 27971-19-3P 27971-20-6P
27971-21-7P 27971-22-8P 27971-23-9P 27971-24-0P 27974-33-0P
35593-04-5P 35593-05-6P 35593-06-7P 35593-07-8P 35593-08-9P
35593-09-0P 35593-10-3P 35593-11-4P 35593-12-5P 35593-13-6P
35593-14-7P 35593-15-8P 35593-16-9P 35593-17-0P 35593-19-2P
35593-20-5P 35593-21-6P 35593-22-7P 35593-23-8P 35593-24-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 35593-18-1
RL: RCT (Reactant)
(prepn. of **halo enamines** from)

L199 ANSWER 29 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1972:99016 HCAPLUS
DN 76:99016
TI .**alpha**.-**Halo** immonium salts. Preparation from .

alpha.-halo enamines. Action of primary, secondary, and **tertiary amines**
AU Duhamel, Pierre; Duhamel, Lucette; Poirier, Jean M.
CS Lab. Chim. Org., Fac. Sci. Rouen, Mont-Saint-Aignan, Fr.
SO C. R. Acad. Sci., Ser. C (1972), 274(4), 411-14
CODEN: CHDCAQ
DT Journal
LA French
CC 23 (Aliphatic Compounds)
AB **Enamines** RCX:CHNR21 (R = tert-Bu, Et, X = Cl, Br, R21N = Me2N, Et2N, morpholino, or piperidino) were titrated with HClO4 in HOAc or HCl in Et2O to give RCHXCH:N+R21Z- (Z = ClO4 or Cl). These reacted with iso-PrNH2 to give the original **enamine**, and reacted with secondary amines HNR22 (pyrrolidine, piperidine, morpholine, Et2NH, or Pr2NH) to give RC:-CHNR22.
ST **enamines** prepn immonium salts; immonium salt reaction amine; morpholine **enamines**; pyrrolidine **enamines**; piperidine **enamines**; **halo** immonium salt **enamine**
IT **Amines**, reactions
RL: RCT (Reactant)
(with aliphatic and heterocyclic **halo** immonium salts)
IT 34683-43-7P 34683-58-4P 34683-59-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 75-31-0 108-91-8 110-91-8 142-84-7
RL: RCT (Reactant)
(reaction of, with aliphatic and heterocyclic **halo** immonium salts)
IT 123-75-1
RL: RCT (Reactant)
(reaction of, with aliphatic heterocyclic **halo** immonium salts)
IT 34683-46-0 34683-47-1 34683-48-2 34683-49-3 34683-50-6
34683-51-7 34683-52-8 34683-53-9 34683-54-0 34683-55-1
34683-56-2 34683-57-3
RL: RCT (Reactant)
(reaction of, with amines)
IT 109-89-7, reactions 110-89-4, reactions
RL: RCT (Reactant)
(with aliphatic and heterocyclic **halo** immonium salts)

L199 ANSWER 30 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1972:25205 HCAPLUS
DN 76:25205
TI Reactions and mechanisms of **.alpha.-haloenamine**
AU Hsu, Eric T. H.
CS Univ. Connecticut, Storrs, Conn., USA
SO (1971) 104 pp. Avail.: Univ. Microfilms, Ann Arbor, Mich., Order No. 71-18,415
From: Diss. Abstr. Int. B 1971, 32(1), 168
DT Dissertation
LA English
CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
AB Unavailable
ST **halo enamine**; morpholino diphenylethene
IT **Amines**, reactions
RL: RCT (Reactant)
(**enamines, .alpha.-halo**)
IT Reaction mechanism
(of **.alpha.-haloenamines**)

L199 ANSWER 31 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1971:3771 HCAPLUS

DN 74:3771
TI Functionalized **enamines**. IX. Synthesis of fused furan systems via reaction of conjugated **enamines** with .**alpha**.-**haloketones**
AU Pandit, Upendra K.; Reus, H. R.; De Jonge Mrs. K.
CS Lab. Org. Chem., Univ. Amsterdam, Amsterdam, Neth.
SO Recl. Trav. Chim. Pays-Bas (1970), 89(9), 956-60
CODEN: RTCPA3
DT Journal
LA English
CC 32 (Steroids)
GI For diagram(s), see printed CA Issue.
AB Re-action of conjugated **enamines** with .**alpha**.-**bromoketones** in DMF leads to the formation of substituted furans in one practical step. The reaction has been applied to the synthesis of steroido-[3,4-b]furans, e.g. I.
ST furans steroids; **enamines bromoketones** reactions; naphthalenes furans
IT Ketones, reactions
RL: RCT (Reactant)
(.**alpha**.-**halo**, with conjugated **enamines**)
IT **Amines**, reactions
RL: RCT (Reactant)
(**enamines**, .**alpha**.-**haloketones** with conjugated)
IT Androsta-3,5-dieno[3,4-b]furan-17.beta.-ol, 5'-ethyl-, acetate
Androsta-3,5-dieno[3,4-b]furan-17.beta.-ol, 5'-phenyl-, acetate
Cyclohexanone, 2-(2-oxobutyl)-
Inden-2(4H)-one, 5,6,7,7a-tetrahydro-3-methyl-
Naphtho[2,1-b]furan-6(4H)-one, 2-ethyl-5,5a,7,8-tetrahydro-5a-methyl-
Naphtho[2,1-b]furan-6(4H)-one, 5,5a,7,8-tetrahydro-2-(m-methoxyphenyl)-5a-methyl-
Naphtho[2,1-b]furan-6(4H)-one, 5,5a,7,8-tetrahydro-5a-methyl-2-phenyl-
Pregna-3,5,7-trieno[3,4-b]furan-20-one, 5'-phenyl-
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L199 ANSWER 32 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1970:444522 HCAPLUS
DN 73:44522
TI Synthesis and reactions of mono .**alpha**.-**halo** **enamines**
AU Lessard, Marie V.
CS Univ. of Connecticut, Storrs, Conn., USA
SO (1969) 131 pp. Avail.: 70-1281
From: Diss. Abstr. Int. B 1970, 30(7), 3099-100
DT Dissertation
LA English
CC 22 (Physical Organic Chemistry)
AB Unavailable
ST **enamines halogenated; halogenated enamines**
IT **Amines**, preparation
RL: PREP (Preparation)
(**enamines**, mono .**alpha**.-**halo**)

L199 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1969:480614** HCAPLUS
DN **71:80614**
TI .**alpha**.-**Chloroenamines**. III. Substitution and elimination reactions on .**alpha**.-**chloroenamine** -.beta.-acid derivatives. The **synthesis** of an **ynamine** amide and an **ynamine** ester

AU Buyle, R.; Viehe, Heinz G.
CS Union Carbide Eur. Assoc. Res., Brussels, Belg.
SO Tetrahedron (1969),.25(16), 3447-51
CODEN: TETRAB
DT Journal
LA English
CC 23 (Aliphatic Compounds)
AB Readily accessible .beta.-**chloroacyl**-.**alpha**.-**chloro enamines** have two reactive Cl atoms which can be substituted successively with nucleophilic reagents. MeO2CC.tplbond.CNEt2 and Et2NCOC.tplbond.CNEt2 were prepd. from N,N-diethylchloroacetamide via its .beta.-**chloro**-.beta.-**chloroacyl**-.**alpha**.-**chloro enamine** by **chlorine** elimination with Li amalgam.
ST **chloro enamines**; **enamines chloro**; ynamine amides; amides ynamine; esters ynamines
IT Acid **chlorides**
RL: RCT (Reactant)
(aminoalkene, reaction of)
IT 17691-75-7P 25491-79-6P 25491-80-9P 25491-81-0P 25491-82-1P
25491-83-2P 25491-84-3P **25491-85-4P** 25491-86-5P
25492-14-2P 25503-08-6P 25542-59-0P 25542-60-3P
25542-61-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L199 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1969:438880** HCAPLUS
DN **71:38880**
TI **Alkyl** and **aryl .alpha.-chloro enamines**
AU Ghosez, Leon; Haveaux, B.; Viehe, H. G.
CS Univ. Cath. Louvain, Louvain, Belg.
SO Angew. Chem., Int. Ed. Engl. (1969), 8(6), 454-5
CODEN: ACIEAY
DT Journal
LA English
CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
AB R1R2CHCONR2, where R is Et and NR2 is piperidino and morpholino, are treated with COCl2 and base (Et3N or pyridine) to give **chloro enamines** R1R2C:CClNR2 (I). Nucleophilic substitution reactions of I (R1 = R2 = Me, NR2 = piperidino) with R3M, where R3 is Me, Ph, EtS, EtO, and cyclohexyl and M is Li, Na, and MgBr, give Me2C:CR3NR2.
ST **enamines**; piperidines; morpholines; amines unsatd; unsatd amines
IT **Amines**, preparation
RL: PREP (Preparation)
(**enamines, chloro**)
IT **23150-97-2P 23150-98-3P 23150-99-4P**
23151-00-0P 23151-01-1P 23151-02-2P 23257-81-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L199 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1968:114025** HCAPLUS
DN **68:114025**
TI .**alpha**.-**Chloroenamines**. I. Acylation of **ynamines**
AU Buyle, Raoul; Viehe, Heinz G.
CS Union Carbide Eur. Res. Assoc., Brussels, Belg.
SO Tetrahedron (1968), 24(10), 3987-95
CODEN: TETRAB
DT Journal
LA French

CC 23 (Aliphatic Compounds)
GI For diagram(s), see printed CA Issue.
AB Acid **chlorides**, phosgene, thiophosgene, SOCl2 and aromatic sulfonyl **chlorides** readily add to ynamines to give . **alpha.-chloroenamines**. The .**alpha.-chloro**-.beta.-**chlorocarbonylenamines** are thermally remarkably stable as illustrated by their distn. in vacuo without decompn. The reaction of ynamines with oxalyl **chloride** led to 5-(disubstituted amino)-2,2-dichloro-2,3-dihydro-3-furanones (I). The structure of these .**alpha.-chloroenamines** was established by hydrolysis, alcoholysis, and aminolysis.
ST YNAMINES ACYLATION **ENAMINES** VIA; **ENAMINES** VIA ACYLATION YNAMINES
IT **Amines**, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(**enamines**, .**alpha.-chloro**, prepn. by ynamine acylation, and reactions thereof)
IT Addition reactions
(of ynamines with acid **chlorides**, .**alpha.-chloro enamines** by)
IT Acylation
(of ynamines, .**alpha.-chloro enamines** by)
IT Acid **chlorides**
RL: RCT (Reactant)
(reactions of, with ynamines, .**alpha.-chloro enamines** by)
IT 4647-28-3P **14110-41-9P** 14110-43-1P 14110-49-7P **19698-32-9P 20251-21-2P** 20251-24-5P 20251-25-6P 20251-26-7P 20251-27-8P 20251-28-9P 20251-29-0P 20251-30-3P 20251-31-4P 20251-32-5P 20251-33-6P 20251-34-7P 20251-35-8P 20251-36-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L199 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1967:402946 HCAPLUS
DN 67:2946
TI Cyclic **enamines** and imines
AU Blaha, Karel; Cervinka, Otakar
CS Inst. Org. Chem. Biochem., Prague, Czech.
SO Advan. Heterocycl. Chem. (1966), 6, 147-227
DT Journal
LA English
CC 27 (Heterocyclic Compounds (One Hetero Atom))
AB Compds. contg. an **enamine** group (-N-C:C-) in which at least the N atom is part of a ring are reviewed with 416 references. Discussed are structure and physicochem. properties, differences in structure and properties of secondary **enamines** and tertiary **enamines**, and the phenomena of pseudobases and transannular interactions; prepn. of **enamines** by condensation of aldehydes and ketones with amines; prepn. by redn. methods (e.g., partial hydrogenation of quaternary pyridine salts in strongly alk. media, redn. of N-methylpyrrolidone with LiAlH4, redn. of N-alkypiperidones with Na in EtOH, etc.); prepn. by means of organometallic reagents (e.g., treatment of .gamma.-**halo** and .delta.-**halo** nitriles with Grignard reagents to form 1-pyrrolines and 1-piperideines, reaction of N-methyl lactams with Grignard reagents, treatment of imino ethers with Grignard reagents); prepn. utilizing the Claisen condensation (condensation of the . **alpha.**-methylene group in lactams with esters of formic, oxalic, and arylcarboxylic acids); prepn. by elimination reactions (e.g., dehydrohalogenation of N-**chloropyrrolidine** and N-**chloropiperidine** to form 1-pyrroline and 1-piperideine, enzymic oxidative deamination, dehydrogenation of satd. bases with Hg(OAc)2 as in

the dehydrogenation of yohimbine or of 1-methyl-1-azacyclooctane); prepn. by special methods (e.g., pyrolysis of azidostyrene to form a cyclic imine with a 3-membered ring; and reactions of **enamines** with electrophilic and nucleophilic reagents, aldol reactions, special reactions of heteroaromatics contg. an imine group.

IT **Amines**, preparation
Amines, properties
RL: PRP (Properties)
(**enamines**, cyclic)

L199 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN **1960:2261** HCAPLUS
DN **54:2261**
OREF 54:541i,542a-f
TI .**alpha**.-**Halogenated amines**. VI. The cleavage of aminals of higher aldehydes with hydrogen halides and the addition of hydrogen **chloride** to **enamines**
AU Bohme, Horst; Ellenberg, Horst; Herboth, Otto E.; Lehners, Walter
CS Univ. Marburg, Germany
SO Chem. Ber. (1950), 92, 1608-13
DT Journal
LA Unavailable
CC 10G (Organic Chemistry: Heterocyclic Compounds)
GI For diagram(s), see printed CA Issue.
AB cf. C.A. 52, 13726d. The cleavage of aminals of aliphatic or aromatic aldehydes with hydrogen halides yielded the corresponding .**alpha**.-**halogenated** amines of the type RCHClNR2 which were also obtained by the reaction of **enamines** with hydrogen halides. HCl (3.0 g.) in 25 cc. MeCN added dropwise at -15.degree. to 9.5 g. N,N'-benzylidenedimorpholine in 30 cc. MeCN and 20 cc. Et2O, filtered, and evapd. yielded 8.2 g. N-(.**alpha**.-**chlorobenzyl**)morpholine (I). I (9.0 g.) in dry Et2O treated with cooling with 1 equiv. PhLi in Et2O, refluxed 0.5 hr., cooled, dild. with iced H2O, and extd. with Et2O, the ext. reextd. with dil. acid, the aq. acidic ext. basified and extd. with Et2O, and the Et2O evapd. yielded 5.2 g. N-benzhydrylmorpholine, b0.01 90-100.degree. (bath); HCl salt m. 230-3.degree. (iso-PrOH-Et2O). N,N'-Benzylidenedipiperidine (10 g.) in 50 cc. Et2O added dropwise to 3.7 g. HCl in 25 cc. MeCN, filtered, and evapd. in vacuo, the residue treated with cooling with HCN, the excess HCN removed in vacuo, the residue dissolved in H2O, and treated with aq. KOH, and the product isolated with Et2O gave 4.9 g. N-(.**alpha**.-cyanobenzyl)piperidine, b0.5 112.degree., m. 62.degree.; picrate m. 141.degree. (Et2O). Isobutyraldehyde tetramethylaminal, Me2CHCH(NMe2)2 (4.0 g.), b10 39.5-41.0.degree., in 40 cc. Et2O added (at -15.degree.) dropwise to 2.2 g. HCl in dry Et2O pptd. 6.0 g. mixt. of 44% .**alpha**.-**haloamine** and 56% Me2NH.HCl; a 4-g. portion of the mixt. dissolved in 30 cc. HCN and worked up as usual gave 1.5 g. Me2NCH(CN)CHMe2, b10 54.degree.. .**alpha**.-Tripiperideine (II) (7.0 g.) in Et2O treated with cooling with 3 equivs. HCl in Et2O and filtered gave 8.0 g. III. The III treated with 30 cc. liquid HCN gave in the usual manner 7.0 g. 2-cyanopiperidine (IV), b12 90-2.degree.; picrate m. 134.degree. (EtOH-petr. ether); IV.HCl m. 138.degree. (EtOH-petr. ether). II (2.8 g. treated with cooling with 20 cc. HCN yielded 3.0 g. IV, b9 82-4.degree.. IV (1.5 g.) heated with 5.0 g. Ba(OH)2 in 30 cc. H2O until the NH3 odor had disappeared, and the product isolated with Et2O gave 2-carboxyplperidine, m. 262.degree.. II (7.0 g.) and 8.0 g. III in 50 cc. Et2O treated with stirring and cooling with an equiv. amt. PhLi in Et2O, stored 12 hrs., and worked up as usual gave 5.3 g. 2-phenylpiperidine, b13 118.degree., which in air formed the hydrate, m. 60.degree.; HCl salt m. 195-6.degree.. 1-Morpholino-1-butene (12.0 g.) in 30 cc. Et2O treated dropwise at -15.degree. with 3.1 g. HCl in dry Et2O and filtered, the residue dried and dissolved in HCN, and the mixt. worked up gave 6.0 g. .**alpha**.-morpholinovaleronitrile (V), b15

134-6.degree., m. 32.degree.; V.HCl, m. 148.degree. (EtOH-petr. ether). 1,1-Dimorpholinobutane (20.0 g.) and 6.4 g. HCl in dry Et2O deposited at -15.degree. 15.8 g. mixt. of 37% .**alpha**.-**haloamine** and 63% morpholine-HCl; a 14.0-g. portion of the mixt. treated with HCN gave 4.5 g. V, b15 134-6.degree., m. 32.degree.; V.HCl, m. 148.degree..

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=> fil reg
FILE 'REGISTRY' ENTERED AT 09:43:40 ON 19 SEP 2002
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STRUCTURE FILE UPDATES:   17 SEP 2002  HIGHEST RN 452274-20-3
DICTIONARY FILE UPDATES:  17 SEP 2002  HIGHEST RN 452274-20-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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L84             STR
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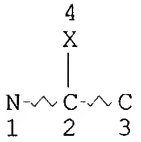


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GRAPH ATTRIBUTES:
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L87             STR
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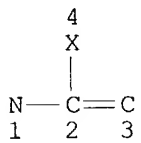


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RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   4

STEREO ATTRIBUTES: NONE
L88         2480 SEA FILE=REGISTRY SUB=L86 SSS FUL L87

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NUMBER OF NODES IS   4

STEREO ATTRIBUTES: NONE
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NUMBER OF NODES IS   4

STEREO ATTRIBUTES: NONE
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100.0% PROCESSED  10183 ITERATIONS                   10183 ANSWERS
SEARCH TIME: 00.00.01


=> d ide can 1123
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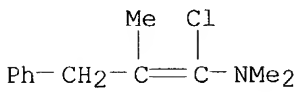
L123 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 124805-03-4 REGISTRY
CN 1-Propen-1-amine, 1-chloro-N,N,2-trimethyl-3-phenyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF **C12 H16 Cl N**
SR CA
LC STN Files: CA, CAPLUS, CASREACT



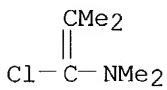
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 112:55680

=> d ide can l121

L121 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 26189-59-3 REGISTRY
CN 1-Propen-1-amine, 1-chloro-N,N,2-trimethyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Propenylamine, 1-chloro-N,N,2-trimethyl- (8CI)
OTHER NAMES:
CN 1-Chloro-1-(dimethylamino)-2-methylpropene
CN 1-Chloro-N,N-2-trimethylpropenylamine
FS 3D CONCORD
MF **C6 H12 Cl N**
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CSCHEM, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

71 REFERENCES IN FILE CA (1967 TO DATE)
71 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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REFERENCE 2: 136:200113

REFERENCE 3: 135:288703

REFERENCE 4: 134:311379

REFERENCE 5: 129:216202

REFERENCE 6: 128:283012

REFERENCE 7: 128:217218

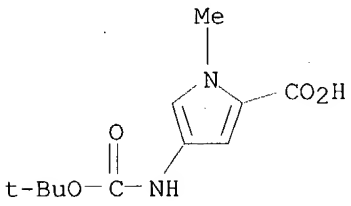
REFERENCE 8: 128:114953

REFERENCE 9: 128:114663

REFERENCE 10: 127:162122

=> d ide can l131

L131 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **77716-11-1** REGISTRY
CN 1H-Pyrrole-2-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-1-methyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H16 N2 O4
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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23 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 137:169795

REFERENCE 2: 136:85750

REFERENCE 3: 136:54024

REFERENCE 4: 136:1626

REFERENCE 5: 135:353702

REFERENCE 6: 135:298753

REFERENCE 7: 133:223039

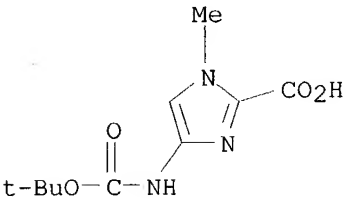
REFERENCE 8: 132:22791

REFERENCE 9: 132:19609

REFERENCE 10: 130:14267

=> d ide can l177

L177 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **128293-64-1** REGISTRY
CN 1H-Imidazole-2-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-1-methyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C10 H15 N3 O4
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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REFERENCE 2: 136:1626

REFERENCE 3: 135:46422

REFERENCE 4: 135:5798

REFERENCE 5: 134:233190

REFERENCE 6: 134:207755

REFERENCE 7: 134:26617

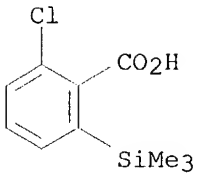
REFERENCE 8: 133:335106

REFERENCE 9: 133:223039

REFERENCE 10: 132:118894

=> d ide can l134

L134 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 150079-25-7 REGISTRY
CN **Benzoic acid, 2-chloro-6-(trimethylsilyl)- (9CI)** (CA INDEX NAME)
FS 3D CONCORD
MF **C10 H13 Cl O2 Si**
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



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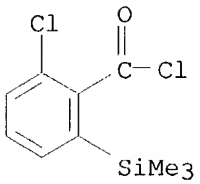
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 124:145558

REFERENCE 2: 119:160256

=> d ide can l136

L136 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 150079-26-8 REGISTRY
CN **Benzoyl chloride, 2-chloro-6-(trimethylsilyl)- (9CI)** (CA INDEX NAME)
FS 3D CONCORD
MF **C10 H12 Cl2 O Si**
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



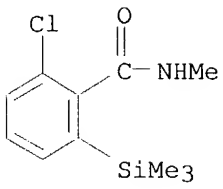
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 119:160256

=> d ide can l158

L158 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **150108-45-5** REGISTRY
CN Benzamide, 2-chloro-N-methyl-6-(trimethylsilyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H16 Cl N O Si
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



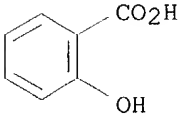
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 119:160256

=> d ide can l140

L140 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 69-72-7 REGISTRY
CN **Benzoic acid, 2-hydroxy- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Salicylic acid (6CI, 8CI)
OTHER NAMES:
CN 2-Carboxyphenol
CN 2-Hydroxybenzenecarboxylic acid
CN 2-Hydroxybenzoic acid
CN o-Carboxyphenol
CN o-Hydroxybenzoic acid
CN Phenol-2-carboxylic acid
CN Psoriacid-S-Stift
CN Retarder W
CN Rutranex
CN Salicylic acid collodion
CN Salonil
FS 3D CONCORD
DR 7681-06-3, 8052-31-1
MF C7 H6 O3
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

16734 REFERENCES IN FILE CA (1967 TO DATE)
2208 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
16777 REFERENCES IN FILE CAPLUS (1967 TO DATE)
7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:178980

REFERENCE 2: 137:177341

REFERENCE 3: 137:176992

REFERENCE 4: 137:175110

REFERENCE 5: 137:175083

REFERENCE 6: 137:174728

REFERENCE 7: 137:174687

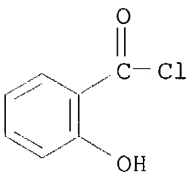
REFERENCE 8: 137:174546

REFERENCE 9: 137:174545

REFERENCE 10: 137:172189

=> d ide can l143

L143 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **1441-87-8** REGISTRY
CN Benzoyl chloride, 2-hydroxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Salicyloyl chloride (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2-Hydroxybenzoyl chloride
CN o-Hydroxybenzoyl chloride
CN Salicyl chloride
CN Salicylic acid chloride
FS 3D CONCORD
MF C7 H5 Cl O2
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, HODOC*, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

182 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

182 REFERENCES IN FILE CAPLUS (1967 TO DATE)
9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:340997

REFERENCE 2: 135:288742

REFERENCE 3: 135:242175

REFERENCE 4: 134:366835

REFERENCE 5: 134:340466

REFERENCE 6: 134:280845

REFERENCE 7: 134:46644

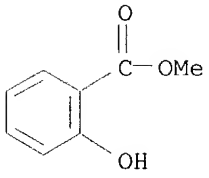
REFERENCE 8: 133:317397

REFERENCE 9: 133:150124

REFERENCE 10: 132:347588

=> d ide can l146

L146 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **119-36-8** REGISTRY
CN Benzoic acid, 2-hydroxy-, methyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Salicylic acid, methyl ester (6CI, 8CI)
OTHER NAMES:
CN 2-(Methoxycarbonyl)phenol
CN 2-Carbomethoxyphenol
CN 2-Hydroxybenzoic acid methyl ester
CN Analgit
CN Anthrapole ND
CN Exagien
CN Flucarmit
CN Methyl 2-hydroxybenzoate
CN Methyl o-hydroxybenzoate
CN Methyl salicylate
CN o-Hydroxybenzoic acid methyl ester
CN Wintergreen oil
FS 3D CONCORD
DR 8022-86-4, 8024-54-2
MF C8 H8 O3
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3459 REFERENCES IN FILE CA (1967 TO DATE)
78 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3469 REFERENCES IN FILE CAPLUS (1967 TO DATE)
115 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:171357

REFERENCE 2: 137:169470

REFERENCE 3: 137:154948

REFERENCE 4: 137:152349

REFERENCE 5: 137:152311

REFERENCE 6: 137:151347

REFERENCE 7: 137:140331

REFERENCE 8: 137:139672

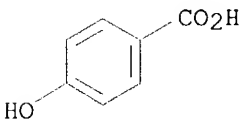
REFERENCE 9: 137:129863

REFERENCE 10: 137:124335

=> d ide can 1148

L148 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **99-96-7** REGISTRY
CN Benzoic acid, 4-hydroxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, p-hydroxy- (8CI)
OTHER NAMES:
CN 4-Carboxyphenol
CN 4-Hydroxybenzoic acid
CN p-Carboxyphenol
CN p-Hydroxybenzoic acid
CN p-Salicylic acid
CN Paraben-acid
FS 3D CONCORD
MF C7 H6 O3
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8012 REFERENCES IN FILE CA (1967 TO DATE)
702 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8027 REFERENCES IN FILE CAPLUS (1967 TO DATE)
9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:178864

REFERENCE 2: 137:173993

REFERENCE 3: 137:171357

REFERENCE 4: 137:171220

REFERENCE 5: 137:169712

REFERENCE 6: 137:169287

REFERENCE 7: 137:168563

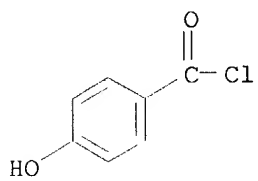
REFERENCE 8: 137:166271

REFERENCE 9: 137:166236

REFERENCE 10: 137:165748

=> d ide can l150

L150 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **28141-24-4** REGISTRY
CN Benzoyl chloride, 4-hydroxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoyl chloride, p-hydroxy- (7CI)
OTHER NAMES:
CN 4-Hydroxybenzoyl chloride
CN p-Hydroxybenzoyl chloride
FS 3D CONCORD
MF C7 H5 Cl O2
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

50 REFERENCES IN FILE CA (1967 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
50 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:136563

REFERENCE 2: 135:331243

REFERENCE 3: 135:84297

REFERENCE 4: 133:296035

REFERENCE 5: 133:281277

REFERENCE 6: 131:322448

REFERENCE 7: 129:343609

REFERENCE 8: 129:81542

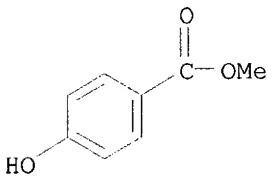
REFERENCE 9: 127:325767

REFERENCE 10: 127:176727

=> d ide can l152

L152 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **99-76-3** REGISTRY
CN Benzoic acid, 4-hydroxy-, methyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, p-hydroxy-, methyl ester (6CI, 8CI)
OTHER NAMES:
CN 4-(Carbomethoxy)phenol
CN 4-(Methoxycarbonyl)phenol
CN 4-Hydroxybenzoic acid methyl ester
CN E 218
CN E 218 (preservative)
CN Killitol
CN Maseptol
CN Mekkings M
CN Metaben
CN Metagin
CN Methaben
CN Methyl 4-hydroxybenzoate
CN Methyl Butex
CN Methyl chemosept
CN Methyl p-hydroxybenzoate
CN Methyl Parasept
CN Methylben
CN Methylparaben
CN Metoxyde
CN Moldex
CN Nipagin
CN Nipagin M
CN p-Carbomethoxyphenol
CN p-Hydroxybenzoic acid methyl ester
CN p-Methoxycarbonylphenol

CN Para M
CN Paridol
CN Preserval
CN Preserval M
CN Septos
CN Solbrol
CN Solbrol M
CN Tegosept M
FS 3D CONCORD
MF C8 H8 O3
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4129 REFERENCES IN FILE CA (1967 TO DATE)
53 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4140 REFERENCES IN FILE CAPLUS (1967 TO DATE)
170 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:174985

REFERENCE 2: 137:174807

REFERENCE 3: 137:174539

REFERENCE 4: 137:171357

REFERENCE 5: 137:166196

REFERENCE 6: 137:165015

REFERENCE 7: 137:161690

REFERENCE 8: 137:159189

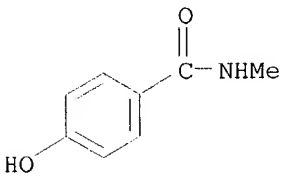
REFERENCE 9: 137:159019

REFERENCE 10: 137:145699

=> d ide can l155

L155 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 27642-27-9 REGISTRY

CN **Benzamide, 4-hydroxy-N-methyl- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Benzamide, p-hydroxy-N-methyl- (7CI, 8CI)**
OTHER NAMES:
CN **N-Methyl-p-hydroxybenzamide**
CN **p-Hydroxy-N-methylbenzamide**
FS 3D CONCORD
MF **C8 H9 N O2**
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMLIST, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)
Other Sources: NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

12 REFERENCES IN FILE CA (1967 TO DATE)
12 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:37630

REFERENCE 2: 124:316391

REFERENCE 3: 117:69583

REFERENCE 4: 112:189059

REFERENCE 5: 89:122904

REFERENCE 6: 85:143105

REFERENCE 7: 85:4830

REFERENCE 8: 72:111099

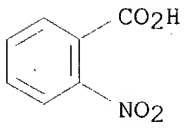
REFERENCE 9: 65:29275

REFERENCE 10: 61:54660

=> d ide can l162

L162 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **552-16-9** REGISTRY
CN Benzoic acid, 2-nitro- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, o-nitro- (8CI)
OTHER NAMES:
CN 2-Nitrobenzoic acid
CN o-Carboxynitrobenzene
CN o-Nitrobenzoic acid
FS 3D CONCORD

MF C7 H5 N O4
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DETHERM*, EMBASE, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1186 REFERENCES IN FILE CA (1967 TO DATE)
16 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1187 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:164866

REFERENCE 2: 137:154661

REFERENCE 3: 137:109401

REFERENCE 4: 137:85356

REFERENCE 5: 137:63215

REFERENCE 6: 137:47439

REFERENCE 7: 137:33054

REFERENCE 8: 137:10200

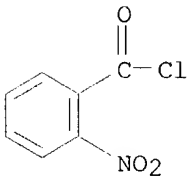
REFERENCE 9: 137:5892

REFERENCE 10: 136:402022

=> d ide can l165

L165 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 610-14-0 REGISTRY
CN **Benzoyl chloride, 2-nitro- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Benzoyl chloride, o-nitro- (7CI, 8CI)**
OTHER NAMES:
CN **2-Nitrobenzoyl chloride**
CN o-Nitrobenzoic acid chloride
CN **o-Nitrobenzoyl chloride**
FS 3D CONCORD
MF **C7 H4 Cl N O3**
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB, GMELIN*, HODOC*, IFICDB, IFIPAT,

IFIUDB, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

525 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
525 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:169553

REFERENCE 2: 137:125185

REFERENCE 3: 137:125160

REFERENCE 4: 137:125085

REFERENCE 5: 137:109099

REFERENCE 6: 137:93496

REFERENCE 7: 137:79106

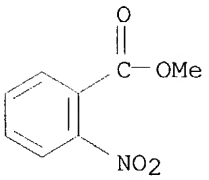
REFERENCE 8: 137:78741

REFERENCE 9: 137:59397

REFERENCE 10: 137:47341

=> d ide can l169

L169 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **606-27-9** REGISTRY
CN Benzoic acid, 2-nitro-, methyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, o-nitro-, methyl ester (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2-(Methoxycarbonyl)nitrobenzene
CN Methyl 2-nitrobenzoate
CN Methyl o-nitrobenzoate
FS 3D CONCORD
MF C8 H7 N O4
LC STN Files: ANABSTR, BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DETHERM*, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

102 REFERENCES IN FILE CA (1967 TO DATE)
102 REFERENCES IN FILE CAPLUS (1967 TO DATE)
15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:369322

REFERENCE 2: 136:309702

REFERENCE 3: 136:14981

REFERENCE 4: 135:344257

REFERENCE 5: 135:46170

REFERENCE 6: 134:178126

REFERENCE 7: 131:293348

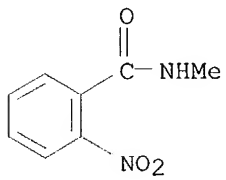
REFERENCE 8: 131:228273

REFERENCE 9: 130:24998

REFERENCE 10: 129:126769

=> d ide can l172

L172 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 3400-29-1 REGISTRY
CN **Benzamide, N-methyl-2-nitro- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Benzamide, N-methyl-o-nitro- (7CI, 8CI)**
OTHER NAMES:
CN **N-Methyl-o-nitrobenzamide**
FS 3D CONCORD
MF **C8 H8 N2 O3**
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1967 TO DATE)
9 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 124:55796

REFERENCE 2: 119:203068

REFERENCE 3: 117:221961

REFERENCE 4: 113:231504

REFERENCE 5: 100:114289

REFERENCE 6: 94:103288

REFERENCE 7: 68:12087

REFERENCE 8: 63:63003

REFERENCE 9: 59:41423

=> d his

(FILE 'HOME' ENTERED AT 06:57:08 ON 19 SEP 2002)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 06:57:32 ON 19 SEP 2002
E PHILLION D/AU
L1 30 S E3,E4,E6-E8
E US2002-061617/AP,PRN
E WO2002-US27953/AP,PRN
E WO2002-US25609/AP,PRN
E US2001-316151
E US2001-316151/AP,PRN
L2 0 S L1 AND HALOENAMINE
L3 16 S HALOENAMINE
L4 11 S L3 AND ALPHA
L5 606 S AMINE#/CW (L) ENAMINE
L6 240 S AMINE#/CW (L) HALO
L7 4 S L5 AND L6
L8 3 S L7 AND ALPHA
L9 13 S L4,L8
L10 5 S L3 NOT L9
L11 103 S HALO(S)ENAMINE
L12 154 S HALO(L)ENAMINE
L13 48 S L11,L12 AND ALPHA
L14 9 S L9 AND L13
L15 13 S L9,L14
L16 39 S L13 NOT L15
L17 4 S L16 AND L6,L5
L18 17 S L15,L17
L19 35 S L16 NOT L18
SEL DN AN 7 8 9 13 23 24
L20 6 S L19 AND E1-E18
L21 23 S L18,L20
L22 24 S ALPHA()(CHLOROENAMINE OR BROMOENAMINE OR FLUOROENAMINE OR IOD
L23 68 S ALPHA(S)(CHLORO OR BROMO OR FLUORO OR IODO)(S)ENAMINE
L24 41 S ALPHA(S)HALO?(S)ENAMINE

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L25          17 S L21 AND L22-L24
L26          23 S L21,L25
L27         105 S L22-L24 NOT L26
L28          97 S L27 NOT L19
L29          44 S L28 AND (NEW REAGENT OR REACTIVE INTERMEDIATE OR SYNTHESIS OR
                SEL DN AN 9 23 26 27 30 34 38 39 41 44
L30          10 S E19-E48 AND L29
L31          33 S L26,L30
                E ENAMINE/CT
                E E4+ALL
L32        1739 S E8
L33         156 S L32 (L) (HALO? OR CHLORO? OR BROMO? OR FLUORO? OR IODO? OR CH
L34         131 S L33 NOT L13-L31
L35           4 S L34 AND (PARTIALLY FLUORINATED OR BROMINATION OR VERY MILD CO
                SEL DN AN 2-3
L36           2 S L35 AND E1-E6
L37          37 S L31,L35
L38          76 S L32 (L) ALPHA
L39          56 S L38 NOT L33-L37
L40          37 S L37 AND L1-L39
L41          37 S L40 AND ?ENAMINE?
L42          37 S L41 AND (HALO? OR CHLOR? OR BROM? OR FLUOR? OR IODO? OR IODI?
L43          35 S L42 AND ALPHA
L44           2 S L42 NOT L43
L45       20436 S TRIETHYLAMINE OR TRIETHYL AMINE OR TRI ETHYLAMINE OR TRI ETHY
L46       20889 S TERTIARY AMINE
                E TERTIARY AMINE/CT
                E E6+ALL
L47        5470 S E2

     FILE 'REGISTRY' ENTERED AT 07:46:31 ON 19 SEP 2002
L48           1 S 121-44-8

     FILE 'HCAPLUS' ENTERED AT 07:47:18 ON 19 SEP 2002
L49       17005 S L48
L50         148 S DIETHYLAMINOETHANE OR DIETHYLAMINO ETHANE OR DIETHYL ETHANAMI
L51       47070 S L45-L47,L49,L50
L52           1 S PENTAVAL?(L)PHOSPHOROUS(S)(HALIDE OR CHLORIDE OR BROMIDE OR I
L53         106 S PHOSPHOROUS()(PENTABROMIDE OR PENTACHLORIDE OR PENTAFLUORIDE
L54        3643 S PHOSPHOR?()(PENTABROMIDE OR PENTACHLORIDE OR PENTAFLUORIDE OR
L55           6 S PHOSPHOR? PENTAIODIDE

     FILE 'REGISTRY' ENTERED AT 07:55:17 ON 19 SEP 2002
L56           4 S 10026-13-8 OR 7789-69-7 OR 7647-19-0 OR 66656-29-9
L57         840 S P/ELS AND (CL OR BR OR I OR F)/ELS NOT (C OR N OR S OR SI OR
L58         526 S L57 NOT (CCS OR RIS OR PMS OR MNS)/CI
L59          48 S L58 AND NR>=2
L60         478 S L58 NOT L59
L61         279 S L60 AND 1/NC
L62         215 S L61 AND 1/P
L63         124 S L62 NOT (TIS OR AYS)/CI
L64         119 S L63 NOT 37CL
L65         114 S L64 NOT SE/ELS
L66         113 S L65 NOT CA/ELS
L67         108 S L66 NOT B/ELS
L68         107 S L67 NOT MN/ELS
L69         100 S L68 NOT ((CD OR GE)/ELS OR 35CL)
L70          98 S L69 NOT (TA OR NB)/ELS
L71          93 S L70 NOT 32P
L72          83 S L71 NOT (36CL OR 33P OR 18F OR 35P OR 74BR OR 35CL OR P35CL?
L73          81 S L72 NOT (P79BR? OR 79BR)
L74          72 S L73 NOT (CLP OR BRP OR IP OR FP OR P81BR?)
L75          13 S L74 AND 6/ATC
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L76          13 S L56,L75
L77          59 S L74 NOT L76

     FILE 'HCAPLUS' ENTERED AT 08:09:17 ON 19 SEP 2002
L78        2781 S L76
L79        5810 S L77
L80        9904 S L78,L79,L52-L55
                SEL RN L22
                DEL SEL

     FILE 'REGISTRY' ENTERED AT 08:10:53 ON 19 SEP 2002

     FILE 'HCAPLUS' ENTERED AT 08:10:53 ON 19 SEP 2002
                SET SMARTSELECT ON
L81          SEL L22 1- RN :      509 TERMS
                SET SMARTSELECT OFF

     FILE 'REGISTRY' ENTERED AT 08:10:54 ON 19 SEP 2002
L82          509 S L81
L83          198 S L82 AND (N AND (CL OR BR OR I OR F))/ELS
L84              STR
L85           50 S L84
L86        25524 S L84 FUL
L87              STR L84
L88         2480 S L87 FUL SUB=L86
                SAV L88 KUMAR061/A
L89              STR L87
L90        10183 S L89 FUL SUB=L86
                SAV L90 KUMAR061A/A
L91         2124 S L88 AND 1/NC
L92          356 S L88 NOT L91

     FILE 'HCAPLUS' ENTERED AT 08:17:39 ON 19 SEP 2002
L93        1163 S L88
L94          41 S L93 AND L51
L95          43 S L93 AND L80
L96        5714 S L90
L97          34 S L83 AND L96
L98           1 S L94 AND L95 AND L96
L99          72 S L88/P AND L94,L95,L97
L100         26 S L99 AND (L51(L)(RACT OR RCT OR RGT OR CAT)/RL OR L90(L)(RACT
L101         16 S L100 AND L51
L102         64 S L93 AND L3-L6,L11,L12,L22-L24,L32-L34
L103          3 S L102 AND L80
L104         15 S L43 AND L93-L103,L45-L47,L49-L55,L78-L80
L105         35 S L43,L104
L106      59697 S ACETONITRILE
L107     113831 S TETRAHYDROFURAN
L108       7836 S 1 4 DIOXANE
L109      12138 S METHYLENECHLORIDE OR METHYLENE CHLORIDE
L110      39945 S CHLOROFORM
L111      10466 S 1 2 DICHLOROETHANE
L112         64 S 1 2 DICHLORO ETHANE
L113     127691 S TOLUENE
L114     245181 S BENZENE

     FILE 'REGISTRY' ENTERED AT 08:33:43 ON 19 SEP 2002
L115          8 S 75-05-8 OR 109-99-9 OR 123-91-1 OR 75-09-2 OR 67-66-3 OR 71-4

     FILE 'HCAPLUS' ENTERED AT 08:33:54 ON 19 SEP 2002
L116          0 S L104 AND L106-L114,L115
L117          9 S L1 AND L2-L47,L49-L55,L78-L80,L93-L114
L118        220 S PHARMACIA?/PA,CS AND L2-L47,L49-L55,L78-L80,L93-L114
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L119          1 S L118 AND L93
L120          0 S L118 AND L3-L6,L11,L12,L22-L24,L32-L34

     FILE 'REGISTRY' ENTERED AT 08:37:50 ON 19 SEP 2002
L121          1 S L88 AND C6H12CLN/MF
L122          4 S L88 AND C12H16CLN/MF AND 46.150.18/RID
L123          1 S L122 NOT BUTEN
L124         59 S (C11H16N2O4 OR C11H15CLN2O3)/MF AND NC4/ES AND 1/NR
L125         42 S L124 AND ESTER
L126         30 S L124 AND 16.136.9/RID
L127         19 S L125 AND L126
L128          5 S L127 AND 1 METHYL
L129         25 S L126 NOT L128
L130          3 S L129 AND 1 METHYL
L131          1 S 77716-11-1
L132          3 S L124 AND CL/ELS
L133         20 S C10H13CLO2SI/MF AND 46.150.18/RID
L134          1 S L133 AND BENZOIC ACID AND 2 CHLORO 6
L135          7 S C10H12CL2OSI/MF AND 46.150.18/RID AND 1/NR
L136          1 S L135 AND BENZOYL CHLORIDE
L137        101 S C7H6O3/MF AND 46.150.18/RID AND 1/NR
L138         28 S L137 AND 2 HYDROXY
L139         27 S L138 AND BENZOIC
               E BENZOIC ACID, 2-HYDROXY-/CN
L140          1 S E3
L141         67 S C7H5CLO2/MF AND 46.150.18/RID AND 1/NR
L142          7 S L141 AND 2 HYDROXY
L143          1 S 1441-87-8
L144        260 S C8H8O3/MF AND 46.150.18/RID AND 1/NR
L145          6 S L144 AND 2 HYDROXY AND METHYL ESTER
L146          1 S 119-36-8
L147         26 S L137 AND 4 HYDROXY AND BENZOIC
L148          1 S 99-96-7
L149          4 S L141 AND 4 HYDROXY
L150          1 S 28141-24-4
L151          9 S L144 AND 4 HYDROXY AND METHYL ESTER
L152          1 S 99-76-3
L153        378 S C8H9NO2/MF AND 46.150.18/RID AND 1/NR
L154         47 S L153 AND 4 HYDROXY
L155          1 S L154 AND BENZAMIDE AND N METHYL
L156         16 S C11H16CLNOSI/MF AND 46.150.18/RID AND 1/NR
L157          2 S L156 AND BENZAMIDE
L158          1 S 150108-45-5
L159         69 S C7H5NO4/MF AND 46.150.18/RID AND 1/NR
L160         12 S L159 AND 2 NITRO
L161          7 S L160 AND BENZOIC
L162          1 S 552-16-9
L163         12 S C7H4CLNO2/MF AND 46.150.18/RID AND 1/NR
L164         28 S C7H4CLNO3/MF AND 46.150.18/RID AND 1/NR
L165          1 S L164 AND BENZOYL CHLORIDE AND 2 NITRO
L166        169 S C8H7NO4/MF AND 46.150.18/RID AND 1/NR
L167         32 S L166 AND 2 NITRO
L168          7 S L167 AND BENZOIC ACID
L169          1 S 606-27-9
L170        198 S C8H8N2O3/MF AND 46.150.18/RID AND 1/NR
L171         32 S L170 AND 2 NITRO
L172          1 S L171 AND BENZAMIDE AND N METHYL

     FILE 'HCAPLUS' ENTERED AT 09:26:12 ON 19 SEP 2002
L173         71 S L121
L174          0 S L131 AND L121

     FILE 'REGISTRY' ENTERED AT 09:26:45 ON 19 SEP 2002
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L175          45 S NCNC2/ES AND C10H15N3O4/MF AND 1/NR
L176          10 S L175 AND 1 METHYL
L177           1 S 128293-64-1
L178           0 S NCNC2/ES AND C10H14CLN3O3/MF AND 1/NR

     FILE 'HCAPLUS' ENTERED AT 09:30:03 ON 19 SEP 2002
L179           0 S L177 AND L173
L180           1 S L123
L181           0 S (L134,L136,L158,L140,L143,L146,L148,L150,L152,L155,L162,L165,
L182           1 S L134 AND L136,L158
L183           1 S L136 AND L158
L184           1 S L182,L183
L185         529 S L140 AND L143,L146
L186          13 S L143 AND L146
L187           8 S L185 AND L186
L188           0 S L146/P AND L187
L189         554 S L148 AND (L150,L152,L155)
L190           3 S L150 AND L152,L155
L191           2 S L189 AND L190
L192           0 S (L152/P OR L155/P) AND L191
L193          59 S L162 AND L165,L169,L172
L194           2 S L165 AND L169,L172
L195           0 S L193 AND L194
L196           0 S L1 AND L173,L123
L197           2 S L1 AND L131,L177,L134,L136,L158,L140,L143,L146,L148,L150,L152
L198           2 S L184,L197
L199          37 S L105,L198
L200           0 S N 1 CHLORO 2 METHYLPROP 1 ENYL N METHYL AMINOMETHYL?
L201          10 S CHLORO(L)METHYLPROP?(L)?AMINOMETHYL?
L202           0 S L180 AND ?STYREN?

     FILE 'HCAPLUS' ENTERED AT 09:42:46 ON 19 SEP 2002

     FILE 'REGISTRY' ENTERED AT 09:43:40 ON 19 SEP 2002
L203          10 S 1 CHLORO AND 2 METHYLPROPEN? AND N/ELS
L204         780 S L86 AND 1 CHLORO AND N
L205         260 S L88 AND L204
L206           1 S L205 AND AMINOMETHYL
L207          22 S L205 AND AMINO METHYL
L208         129 S L205 AND 46.150.18/RID NOT L207
L209          65 S L208 AND 1/NR
L210          47 S L209 AND 1/CL
L211         109 S L205 NOT L206-L210
L212          12 S L211 AND NR>=1
L213          97 S L211 NOT L212
L214          59 S L213 NOT (S OR P OR SI OR O)/ELS
L215          45 S L214 AND 1/CL
L216          17 S L214 AND PROPEN?
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